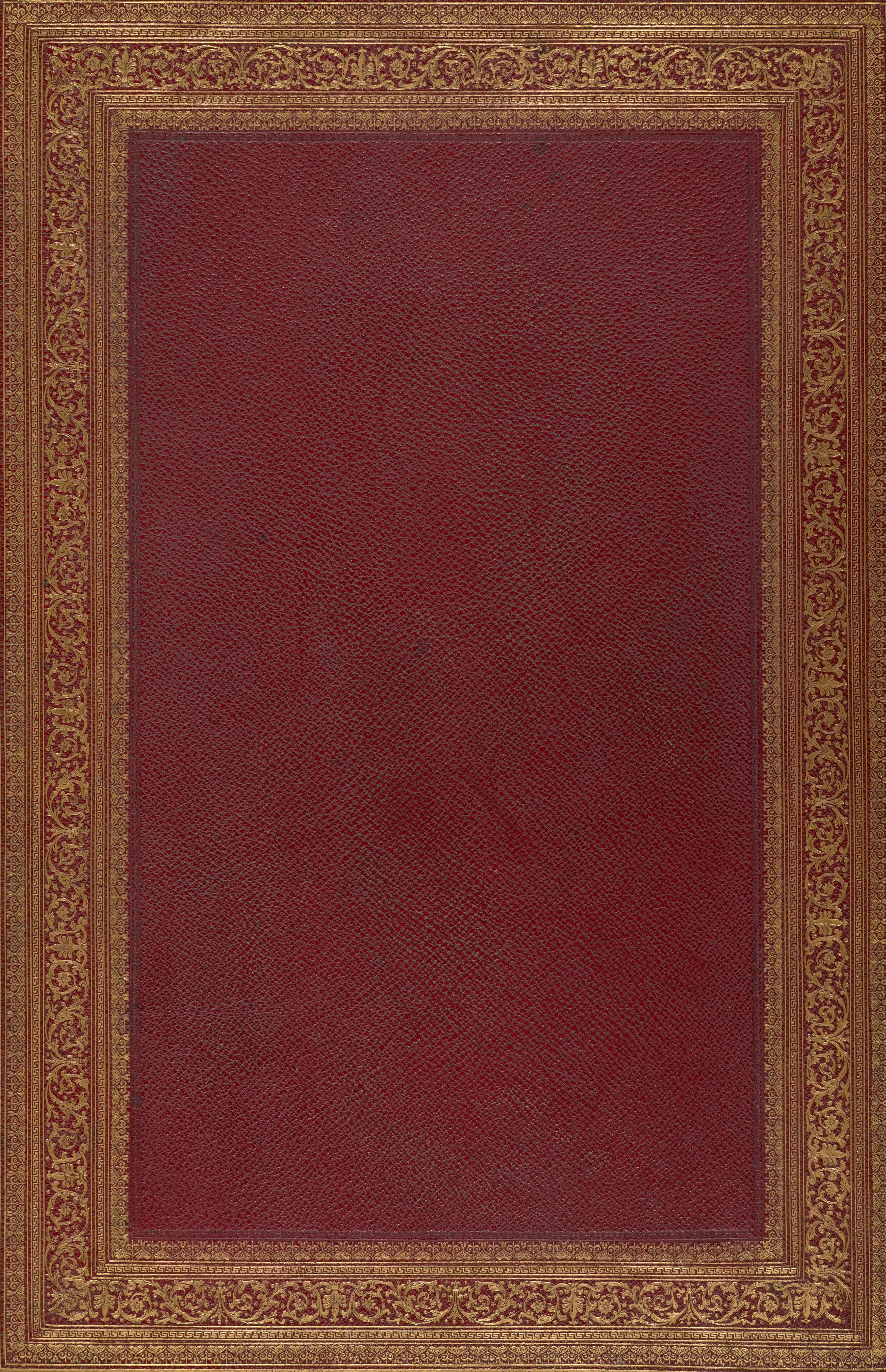
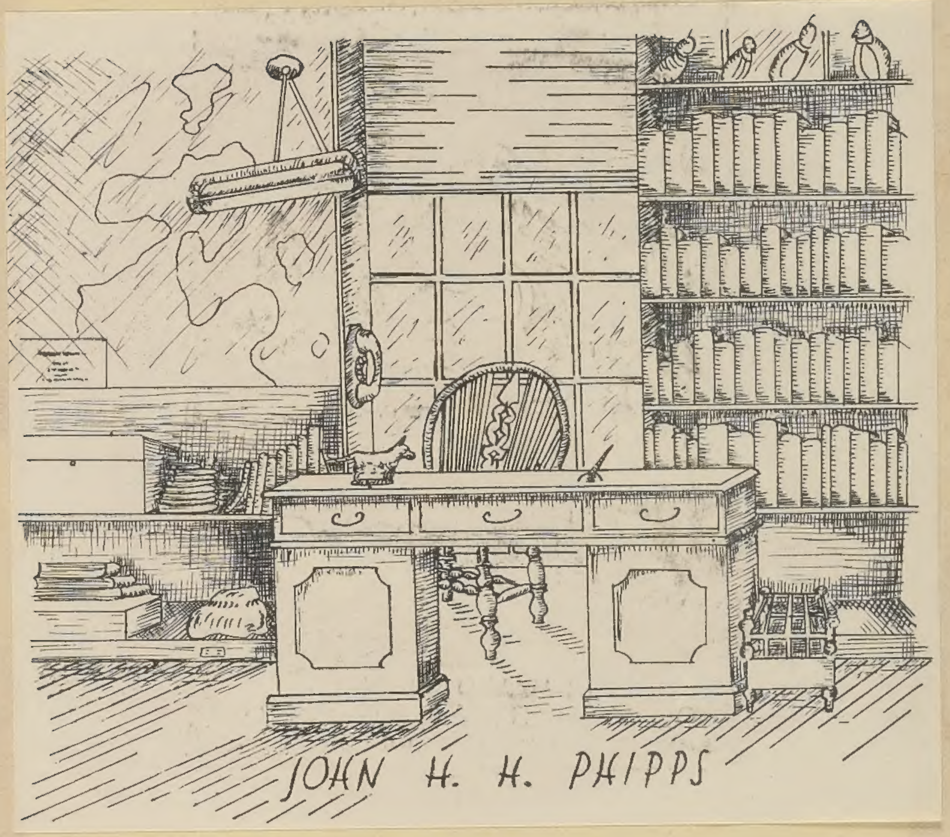


DEO ADJUVANTE
SIR DAVID LIONEL
GOLDSMID-STERN-SALOMONS. BART.
OF BROOMHILL. TUNBRIDGE WELLS.
W.P.B.
1908


JOHN H. H. PHIPPS

A MONOGRAPH

OF

THE TROCHILIDÆ,

OR

FAMILY OF HUMMING-BIRDS.

BY

JOHN GOULD, F.R.S.,

F.L.S., V.P. AND F.Z.S., M.E.S., F.R.GEOG.S., M.RAY S., CORR. MEMB. OF THE ROYAL ACADEMY OF SCIENCES OF TURIN; OF THE SOC. OF THE MUSEUM
OF NAT. HIST. OF STRASBOURG; FOR. MEMB. OF THE NAT. HIST. SOC. OF NÜRNBERG, AND OF THE IMP. NAT. HIST. SOC. OF MOSCOW;
HON. MEMB. OF THE NAT. HIST. SOC. OF DARMSTADT; OF THE NAT. HIST. AND THE NAT. HIST. AND MED. SOCS. OF
DRESDEN; OF THE ROY. SOC. OF TASMANIA; OF THE ROY. ZOOL. SOC. OF IRELAND; OF THE PENZANCE
NAT. HIST. SOC.; OF THE WORCESTER NAT. HIST. SOC.; OF THE NORTHUMBERLAND,
DURHAM, AND NEWCASTLE NAT. HIST. SOC.; OF THE IPSWICH MUSEUM; OF
THE ORN. SOC. OF GERMANY; OF THE DORSET COUNTY MUSEUM AND
LIBRARY; OF THE ROYAL UNITED SERVICE INSTITUTION, ETC.

IN FIVE VOLUMES.

VOL. IV.

LONDON:
PRINTED BY TAYLOR AND FRANCIS, RED LION COURT, FLEET STREET.
PUBLISHED BY THE AUTHOR, 26 CHARLOTTE STREET, BEDFORD SQUARE.
1861.

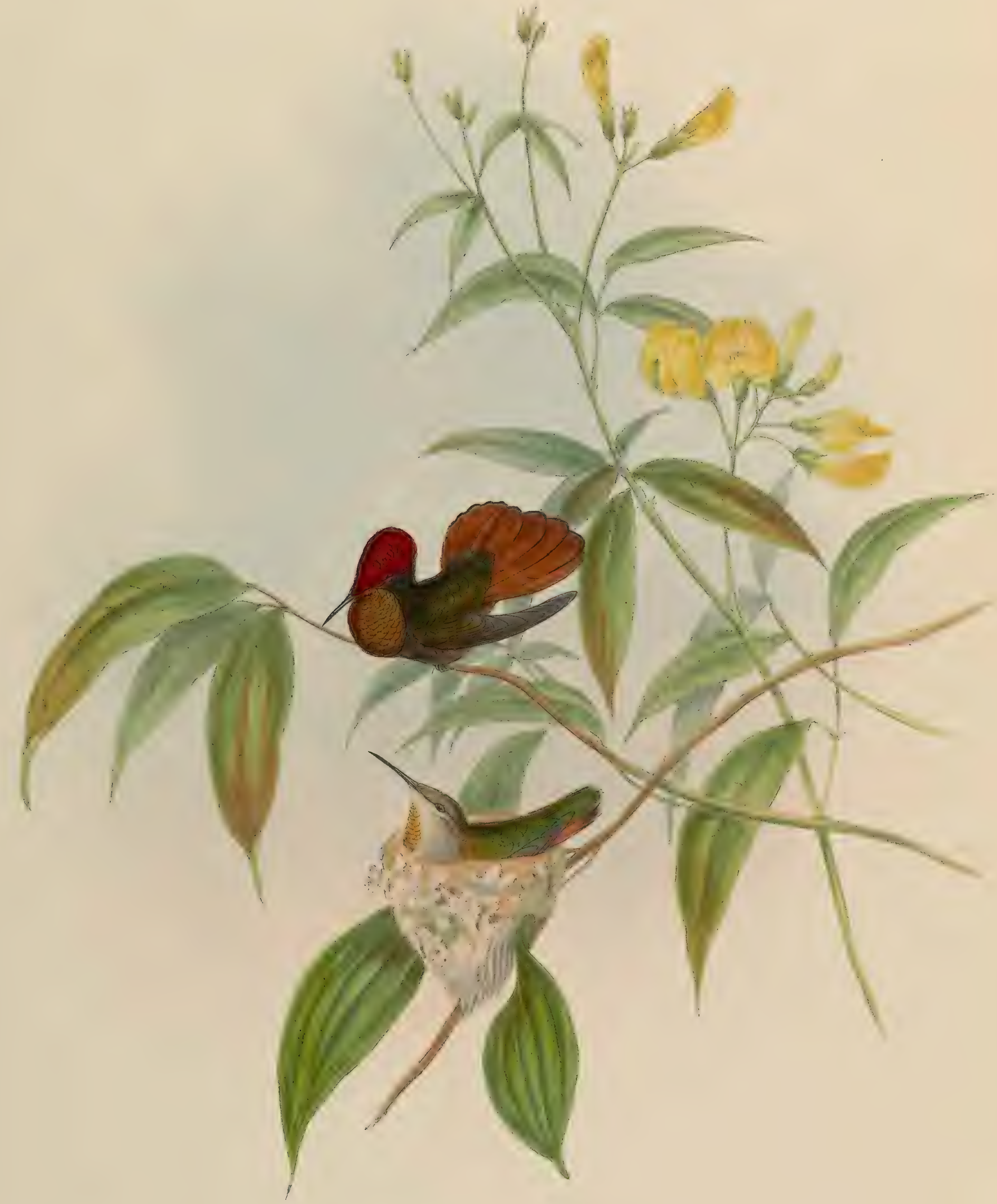
[THE AUTHOR RESERVES TO HIMSELF THE RIGHT OF TRANSLATION.]

FQL
696
[illegible]
[illegible]
[illegible]

LIST OF PLATES.

VOL. IV.

Chrysolampis moschitus . . . 204
Orthorhynchus cristatus . . . 205
——— ornatus 206
——— exilis 207
Cephalepis Lalandi 208
——— Loddigesi 209
Klais Guimeti 210
Myiabeillia typica 211
Heliactin cornuta 212
Heliothrix auritus 213
——— auriculatus 214
——— phainolæma 215
——— purpureiceps 216
——— Barroti 217
Schistes Geoffroyi 218
——— personatus 219
——— albogularis 220
Augastes scutatus 221
——— Lumachellus 222
Petasophora serrirostris . . . 223
——— Anais 224
——— iolata 225
——— coruscans 226
——— thalassina 227
——— cyanotis 228
——— Delphinæ 229
Chrysobronchus virescens . . . 230
——— viridicaudus 231
Patagona gigas 232
Docimastes ensiferus 233
Eugenia Imperatrix 234
Helianthea typica 235
——— Bonapartei 236
——— Eos 237
——— Lutetiæ 238
——— violifera 239
Heliotrypha Parzudaki 240
——— viola 241
Heliangelus Clarissæ 242
——— strophianus 243
Heliangelus Spencei 244
——— amethysticollis . . . 245
——— Mavors 246
Diphlogæna Iris 247
——— Aurora 248
Clytolæma rubinea 249
——— ? aurescens . . . 250
Bourcieria torquata 251
——— fulgidigula 252
——— Conradi 253
——— Inca 254
Cœligena typica 255
——— purpurea 256
——— Prunelli 257
——— Wilsoni 258
Heliomaster longirostris . . . 259
——— Constanti 260
——— pinicola 261
——— mesoleucus 262
——— Angelæ 263
Oreopyra leucaspis 264
Eustephanus galeritus 265
——— Stokesi 266
——— Fernandensis 267
Phæolæma rubinoïdes 268
——— Æquatorialis 269
Eriocnemis cupreiventris . . . 270
——— simplex 271
——— Isaacsoni 272
——— Luciani 273
——— Mosquera 274
——— vestita 275
——— nigrivestis 276
——— Godini 277
——— D'Orbignyi 278
——— Derbianus 279
——— Alinæ 280
——— squamata 281
——— lugens 282
——— Aureliæ 283



CHRYSOLAMPIS MOSCHITUS,

Gould and H.C. Richter, del et lith

Hullmandel & Walton, Imp.

CHRYSOLAMPIS MOSCHITUS.

Ruby and Topaz.

Trochilus moschitus, Linn. Syst. Nat., tom. i. p. 192.—Ib. Gmel. Edit., tom. i. p. 494.—Vieill. Ency. Méth. Orn., part ii. p. 570.—Swains. Birds of Brazil, pl. 30.—Pr. Max. Beitr. zur Naturg. von Bras., p. 56.—Jard. Nat. Lib. Humming Birds, vol. i. p. 103. pl. 11.

Mellisuga Brasiliensis, gutture topazino, Briss. Orn., tom. iii. p. 699. pl. xxxvii. fig. 1.

Le Rubis-topaze, Buff. Hist. Nat. des Ois., tom. vi. p. 19.—Audeb. et Vieill. Ois. dor., tom. i. pp. 62, 64, 102, 103, 104. pls. 29, 30, 54, 55, 56.

L'Oiseau mouche à gorge topaze du Brésil, Buff. Pl. Enl. 227. fig. 2, et 640. fig. 1.

L'Oiseau-mouche à gosier doré, Audeb. et Vieill. Ois. dor., tom. i. p. 89. pl. 46.

Ornismya moschita, Less. Hist. Nat. des Ois. Mou., p. 166. pls. 52, 53, 54.—Ib. Traité d'Orn., p. 280.

Chrysolampis moschitus, Boie in Oken's Isis, 1831.—Bonap. Consp. Gen. Av., p. 82, *Chrysolampis*, sp. 1.

Mellisuga moschita, Steph. Cont. of Shaw's Gen. Zool., vol. xiv. p. 253.—Gray and Mitch. Gen. of Birds, vol. i. p. 113, *Mellisuga*, sp. 96.

Chrysolampis mosquitus, Bonap. Rev. et Mag. de Zool. 1854, p. 256.—Reichenb. Aufz. der Colibris, p. 9.—Ib. Troch. enumer., p. 5. pl. DCCXXIII.

Trochilus pegasus, Gmel. Edit. Linn. Syst. Nat., tom. i. p. 495?

——— *gujanensis*, Ib., p. 498?—Lath. Ind. Orn., vol. i. p. 317.

——— *carbunculus*, Ib., p. 498.—Lath. Ind. Orn., vol. i. p. 317.

——— *elatus*, Ib., p. 499.

Mellisuga Cayanensis, ventre griseo, Briss. Orn., tom. iii. p. 709. pl. xxxvi. fig. 4?

L'Oiseau mouche de la Guiane, Audeb. et Vieill. Ois. dor., tom. i. p. 116?

L'Escarboucle, Buff. Hist. Nat. des Ois., tom. vi. p. 28.—Audeb. et Vieill. Ois. dor., tom. i. p. 102. pl. 54.

Guiana Humming Bird, Lath. Gen. Syn., vol. ii. p. 781.—Ib. Gen. Hist., vol. iv. p. 336?

Carbuncle Humming Bird, Lath. Gen. Syn., vol. ii. p. 782.—Shaw, Gen. Zool., vol. viii. p. 333. —Lath. Gen. Hist., vol. iv. p. 337.

Grey-bellied Humming Bird, Lath. Gen. Hist., vol. iv. p. 334?—Shaw, Gen. Zool., vol. viii. p. 332?

Ruby-necked Humming Bird, Lath. Gen. Syn., vol. ii. p. 779.—Ib. Gen. Hist., vol. iv. p. 330.

Chrysolampis carbunculus, Reichenb. Aufz. der Colibris, p. 9.—Ib. Troch. enumer., p. 5. pl. DCCXXIII. fig. 4650.

Small green and crimson Humming Bird, Bancroft's Guiana, p. 168.

Trochilus with a ferruginous tail, Bancroft's Guiana, p. 168.

Aurora Humming Bird, Lath. Gen. Hist., vol. iv. p. 338.

Ruby-headed Humming Bird, Shaw, Gen. Zool., vol. viii. p. 329. pl. 42.

Brown-crowned Humming Bird, Trochilus hypophæus, Shaw, Gen. Zool., vol. viii. p. 333?

If any one species of this extensive family of birds be better known than another, it is undoubtedly the Ruby and Topaz Humming Bird here represented, for it is not only one of those earliest discovered, but its beauty is of such a character as at once to fix the attention of every observer. It is also one of the commonest of the entire group, and plays no inconsiderable part in commerce, the capturing and skinning of the specimens which are sent home by thousands affording considerable employment to the Brazilian slaves and others in its native country, and to the bird-mounters in Europe and elsewhere; this species always forming a conspicuous object among the groups of birds arranged under glass shades as ornaments for our drawing-rooms, for which indeed few are better adapted, as its brilliant ruby crown and topaz throat are there shown to great advantage. Such are the purposes to which the skins of this species are applied; but what part does it perform in a state of nature? Alas! on this subject nothing whatever is known; for although the bird has now been described for more than a hundred years, and its native country repeatedly visited by enterprising explorers, no one of them has placed on record any details as to its habits or economy, with all of which it would be most interesting to be made acquainted, for it can scarcely be supposed that so much beauty has been bestowed upon it without some special purpose in view.

Although Brazil is stated to be one of the countries inhabited by the Ruby and Topaz, according to the best and most recent authority, Mr. Reeves, it is not found so far south as Rio de Janeiro, but is very common in Bahia and Pernambuco, where, however, it only remains during a part of the year; from these localities northward, in each of the Guianas, the island of Trinidad, the Caraccas, and a great part of Columbia, it everywhere occurs in abundance. It is said to perch occasionally on the more slender branches of the flowering trees and shrubs it frequents, and to spread its large rounded tail to the fullest extent like the Peacock, and that it then appears to the greatest advantage.

Some minute differences occur in the colouring and in the size of Columbian, when compared with Brazilian specimens; they appear, however, to be mere local variations, similar to those observable among many other birds. But endless indeed are the changes which take place in the plumage of the bird between youth and maturity, and so puzzling are they, that, after the most careful examination of numberless examples, I am unable even now to form any very distinct ideas on the subject. These changes it is which have occasioned the confusion existing with respect to this species in the works of the older authors, and which has led them to regard each state as characteristic of a specific difference, the result being, a list of synonyms pertaining to this bird, unsurpassed perhaps in number by those of any other species.

The nest is a round cup-shaped structure, composed of cottony materials, and decorated externally with leaves and small patches of lichens.

Descriptions of the more important of the various states of plumage above alluded to are here given; but it is impossible to say to which sex they belong, as that can only be determined by dissection.

At a very young age the upper surface is bronzy brown, with a crescent of rufous at the tip of each feather; the tail bronzy brown, faintly barred with rufous and tipped with white; under surface brownish grey.

In another stage the head and back are bronzy greenish brown; the rump-feathers are broadly tipped with rufous; the tail is bronzy purple, the outer feathers being tipped with white; under surface grey, with a stripe of metallic topaz-coloured feathers down the centre of the throat.

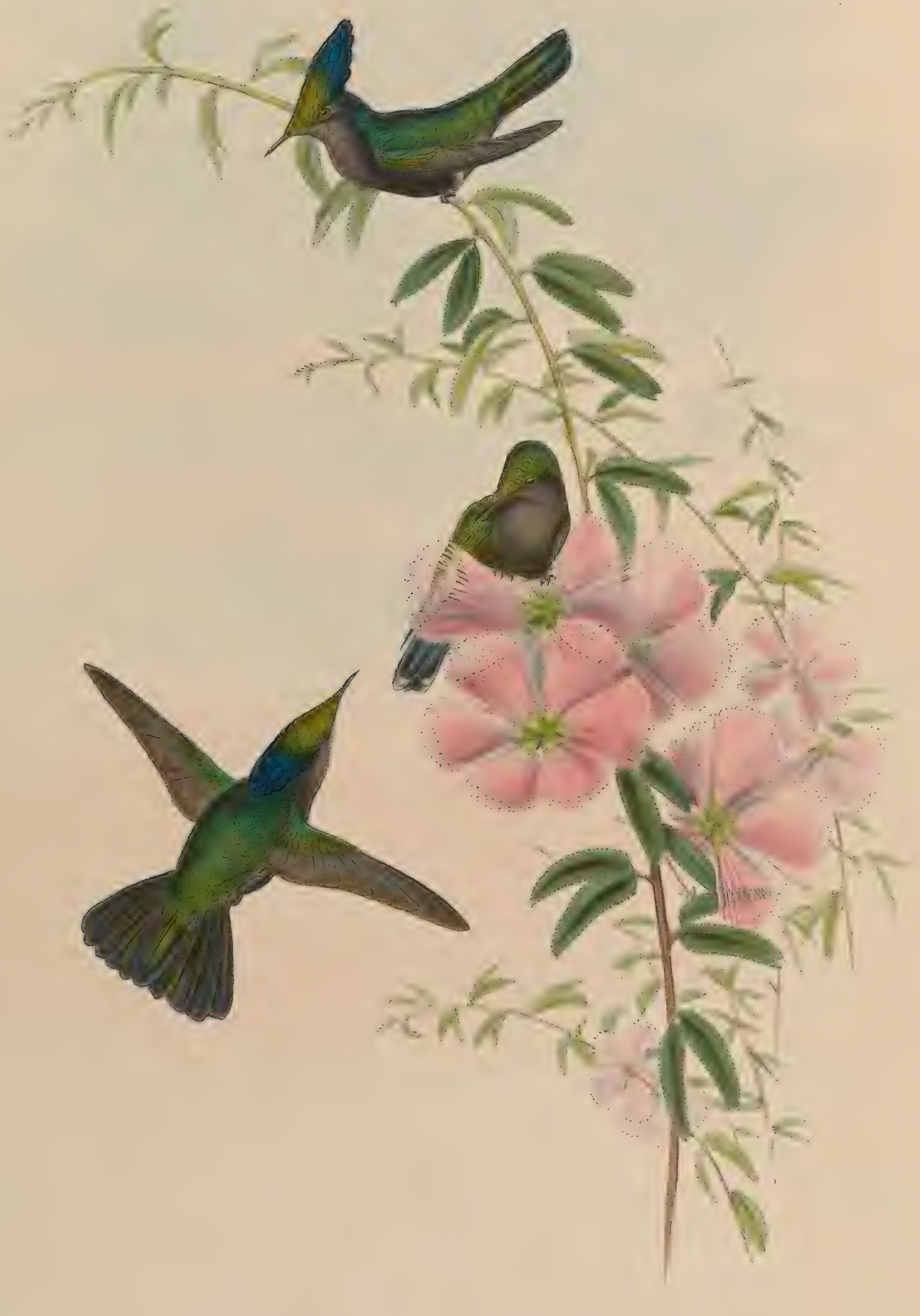
In a third state we find the head and all the upper surface coppery bronze; rump bronzy green; central tail-feathers bronzy green, deepening into black towards the extremity; the lateral tail-feathers grey at the base, then black, and tipped with white; under surface grey, and in some specimens a few of the topaz-coloured metallic feathers down the centre of the throat.

In a fourth state the head is dull brown; back bronzy brown; rump green; central tail-feathers bronzy green, deepening into black at the extremity; the lateral feathers chestnut-red at the base, then purplish, and tipped with white; under surface grey, with a large patch of the topaz-coloured metallic feathers on the centre of the throat.

In the fully adult state, the male has the forehead, crown, occiput and nape metallic ruby-red; chin, throat and breast resplendent topaz-yellow; all the upper surface and wing-coverts dark velvety bronzy brown; wings purplish brown; tail rich dark chestnut-red, slightly tipped with black; abdomen dark olive-brown; under tail-coverts rufous; bill and feet blackish brown.

The Plate represents the two sexes of the size of life. For the plant, the name of which is unknown to me, I am indebted to the drawings of T. Reeves, Esq.

DSI



ORTHORHYNCHUS CRISTATUS.

J Gould and H C Richter, del et lith.

Hullmandel & Walton, Imp.

ORTHORHYNCHUS CRISTATUS.

Blue-Crest.

Trochilus cristatus, Linn. Syst. Nat., tom. i. p. 192.—Ib. Gmel. Edit., tom. i. p. 498.—Lath. Ind. Orn., tom. i. p. 317.—Swains. Birds of Brazil, pl. 21.—Vieill. Ency. Méth. Orn., part 2. p. 565. pl. 131. fig. 3.—Schomb. Hist. of Barbadoes, p. 681.

Mellisuga cristata, Briss. Orn., tom. iii. p. 714. pl. xxxvii. fig. 2.—Id. 8vo, tom. ii. p. 35.—Gray and Mitch. Gen. of Birds, vol. i. p. 113, *Mellisuga*, sp. 98.

L'Oiseau-mouche huppé, Buff. Hist. Nat. des Ois., tom. vi. p. 22.—Ib. Sonn. Edit., tom. xvii. p. 173.

L'Oiseau-mouche huppé de Cayenne, Buff. Pl. Enl. 227. fig. 1.

Crested Humming-bird, Edw. Nat. Hist. of Birds, vol. i. p. 37. pl. 37.

Crested Green Humming-bird, Lath. Gen. Syn., vol. ii. p. 783.—Shaw, Gen. Zool., vol. viii. p. 352. pl. 44.—Lath. Gen. Hist., vol. iv. p. 339.

Orthorhynchus cristatus, Bonap. Consp. Gen. Av., p. 83, *Orthorhynchus*, sp. 1.—Reichenb. Aufz. der Colibris, p. 11.—Bonap. Rev. et Mag. de Zool. 1854, p. 256.

Ornismya cristata, Less. Les Troch., p. 20. pl. 4.—Ib. Traité d'Orn., p. 285.—Ib. Ind. Gen. et Syn. des Ois. du Gen. *Trochilus*, p. xxx.

Trochilus pileatus, Lath. Ind. Orn., vol. i. p. 318.

——— *puniceus*, Gmel. Edit. Linn. Syst. Nat., tom. i. p. 497.

L'Oiseau-mouche à huppé bleue, Aud. et Vieill. Ois. dor., tom. i. p. 112. pl. 63.

Crested Brown Humming-bird, Lath. Gen. Syn., vol. ii. p. 784.—Shaw, Gen. Zool., vol. viii. p. 354.—Lath. Gen. Hist., vol. iv. p. 340.

It will have been noticed, while perusing the pages of the present work, that many species of Humming-birds are confined to very small areas of country, some to the cones of lofty mountains, and some to the craters of extinct volcanos, while others are migratory, and extend their range over vast regions. A similar law appears to govern some at least of the species inhabiting the West Indian Islands: for instance, two species are found in Jamaica, which up to the present time have not been detected in St. Domingo; on the other hand, of the St. Domingo species two at least are not found in Jamaica: and not only does this law appear to prevail on those two islands alone, the largest of the West Indian group, but to extend to the smaller islands also, most of them being inhabited by a species peculiarly its own; hence it becomes a matter of much interest to ascertain to which of the islands the numerous species of the West Indian Humming-birds really belong. I am aware that in making the above remarks I am digressing from the more immediate subject of the present paper—the history of *Orthorhynchus cristatus*; but I have done so intentionally, in order to point out the utter confusion which exists with regard to the localities given by the older authors, whose errors, I regret to say, have been perpetuated by most of the more recent writers on the Trochilidæ; thus, one and all of them give St. Domingo as the habitat of the present bird, while, so far as I have been able to ascertain, it is not found within hundreds of miles of that island; and, although I am unable to give the extent of its range, or how many of the islands it frequents, I can positively state that it is a native of Barbadoes, and I believe of St. Vincent's also. In Martinique its place appears to be occupied by a nearly allied species—the *Orthorhynchus exilis*. A complete survey of the Windward and Leeward Islands, furnishing an account of the fauna of each, by some competent person, would, in a scientific point of view, be attended with the most interesting results; and I trust the time is not far distant when such a task will be undertaken and accomplished. Up to the present time, numerous examples of this bird, its nest and eggs, have been sent to Europe, but hitherto not one word has been recorded respecting its peculiar actions and habits ; an account of which would doubtless prove highly interesting, as they probably differ as much from those of the members of the group as the bird does in its form and colouring.

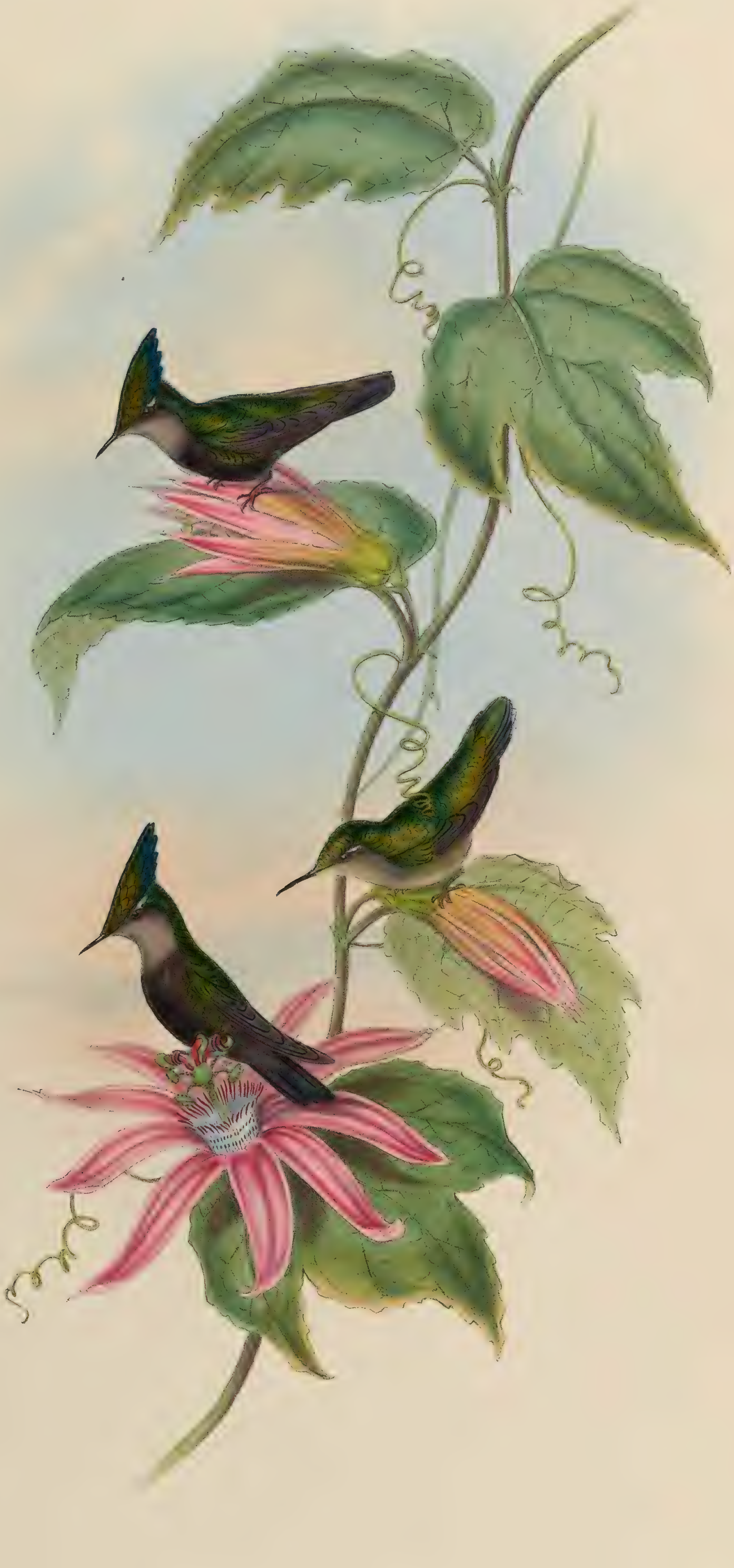
As is very commonly the case among the Trochilidæ, the sexes present a marked difference in appearance, the beautiful crest which adorns the male being entirely wanting in the opposite sex.

Sir Robert Schomburgk found this bird in Barbadoes, and specimens collected by him are contained in the Collection at the British Museum. As will be seen on reference to his "History of Barbadoes," it is the only Humming-bird observed by him in that island.

The male has the forehead and crown rich golden-green, blending into the rich deep blue of the elongated crest-feathers ; sides and back of the head, upper surface of the body, wing- and tail-coverts dark grass-green ; wings purplish-brown ; two centre tail-feathers dark purplish-green, the remainder purplish-black ; under surface dull black, with a wash of grey on the throat ; bill and feet blackish-brown.

The female has the head, all the upper surface, wing- and tail-coverts bronzy-green ; wings purplish-brown ; central tail-feathers dark bronzy-green, the remainder purplish-black, the two outer on each side slightly tipped with grey ; under surface dark smoky-grey, somewhat lighter on the throat.

The accompanying Plate represents two males and a female, of the size of life. The plant is the *Calliandra brevipes*.



ORTHORHYNCHUS ORNATUS, *Gould.*

J. Gould and H.C. Richter, del. et lith.

Walter & Cohn, Imp.

ORTHORHYNCHUS ORNATUS, *Gould.*

Green and Blue Crest.

L'Oiseau-mouche huppé, Less. Hist. Nat. des Ois.-Mou., p. 113. pls. 31, 32?

INDEPENDENTLY of examples of *Orthorynchus cristatus* and *O. exilis,* specimens of a third species somewhat intermediate in the form and colouring of the crest have for many years been contained in the Loddigesian collection at Hackney, and in my own; but from which of the West India Islands they were sent, is unknown. For this bird I propose the name of *O. ornatus.* Its crest is longer than that of either of its allies, and the point, and point only, is blue; whereas in the *O. cristatus* the blue and green colouring is nearly equally divided, and in *O. exilis* the crest is wholly green. In the colouring of their bodies the three species are very similar. This is the bird alluded to in my account of *O. exilis* as being intermediate between that species and *O. cristatus.*

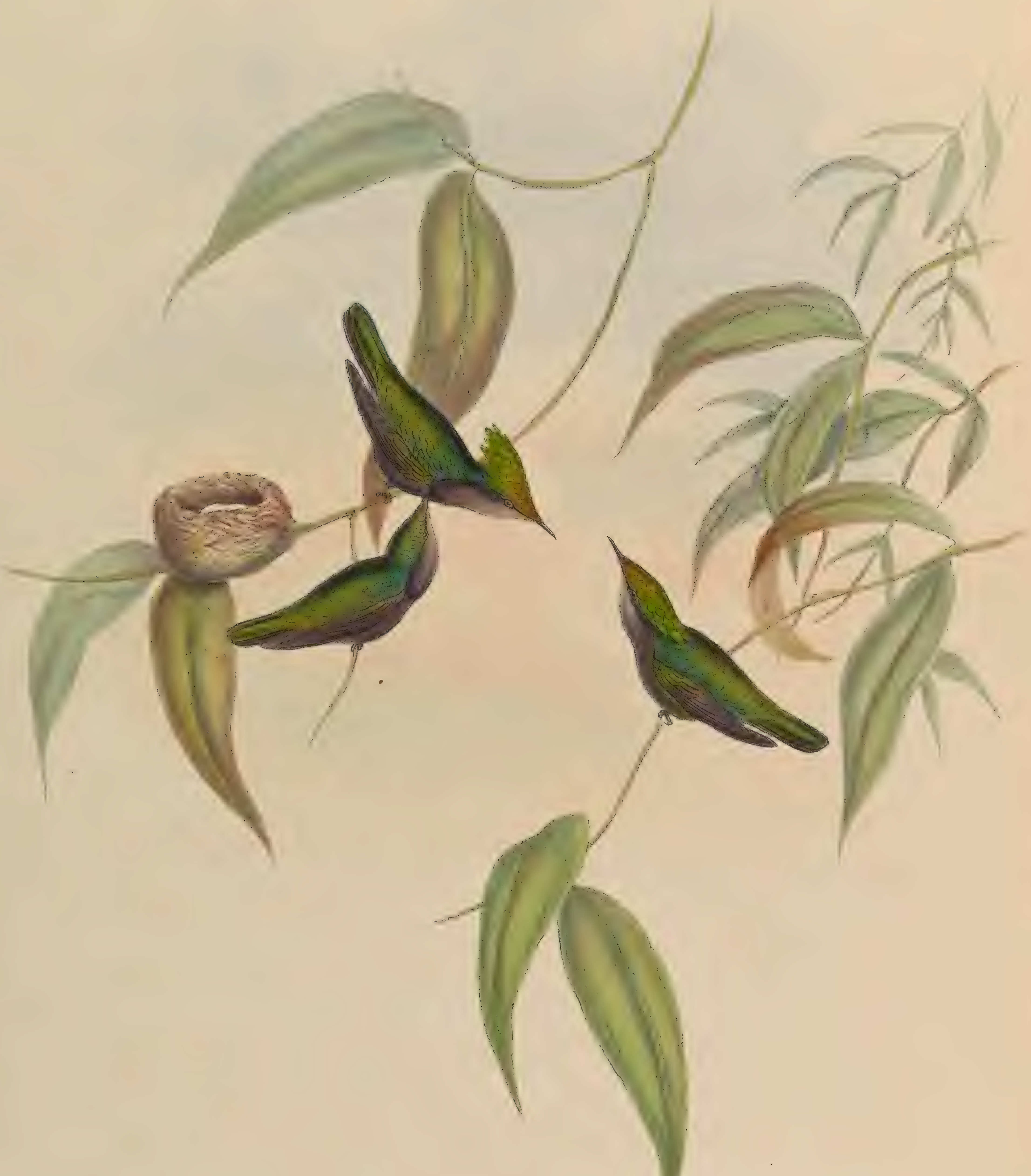
The following remark and description have already appeared in the Introduction, but I cannot perhaps do better than reproduce them here.

This species bears a general resemblance to the *O. cristatus,* but differs from that bird in being of a somewhat smaller size, and in having the basal two-thirds of the crest glittering green and the tip only blue; the crest is also longer and more elegant in form than that of *C. cristatus* or *C. exilis.* With the latter it can never be confounded, while the former may always be distinguished from it by the truncate form of the green portion of its crest. It is just possible that the birds represented on the 31st and 32nd plates of Lesson's 'Histoire Naturelle des Oiseaux-mouches' may have reference to this bird.

Basal two-thirds of the crest green, the apical third blue; upper surface deep grass-green; throat dark smoky grey, becoming much darker on the abdomen; flanks glossed with green; wings and tail purplish black; bill black.

Total length 3¼ inches; bill ½; wing 1⅞; tail 1¼.

The figures are of the natural size. The plant is the *Tacsonia sanguinea.*



ORTHORHYNCHUS EXILIS.

J Gould and H C Richter, del & lith

Hullmandel & Walton, Imp

ORTHORHYNCHUS EXILIS.

Gilt-Crest.

Trochilus exilis, Gmel. Edit. Linn. Syst. Nat., tom. i. p. 484.—Lath. Ind. Orn., vol. i. p. 310.—Vieill. Ency. Méth. Orn., part 2. p. 550.

L'Oiseau-mouche huppé, Aud. et Vieill. Ois. dor., tom. i. pp. 91, 92. pls. 47, 48.

Mellisuga exilis, Gray and Mitch. Gen. of Birds, vol. i. p. 113, *Mellisuga,* sp. 98.

Trochilus cristatellus, Lath. Ind. Orn. Supp., p. xxxix.—Vieill. Ency. Méth. Orn., part 2. p. 556.

Gilt-crested Humming-bird, Lath. Gen. Syn. Supp., vol. ii. p. 171.—Shaw, Gen. Zool. vol. viii. p. 315.

Little Humming-bird, Lath. Gen. Syn., vol. ii. p. 764.—Shaw, Gen. Zool., vol. viii. p. 315.—Lath. Gen. Hist., vol. iv. p. 320.

All-green Humming-bird, Lath. Gen. Hist., vol. iv. p. 357, var. C.

Orthorhynchus chlorolophus, Bonap. Consp. Gen. Av., p. 83, *Orthorhynchus,* sp. 2.

——————— *exilis,* Reichenb. Aufz. der Col., p. 11.—Bonap. Rev. et Mag. de Zool. 1854, p. 265.

Although presenting a general similarity to the *Orthorhynchus cristatus,* the present species may be at all times distinguished from that bird by the more uniform colouring of its crest, which is a beautiful metallic golden-green, with a somewhat deeper golden hue at the base; it is also rather smaller in all its proportions, but particularly in its body and wings.

The utmost confusion exists with regard to the synonymy of this species and its near ally, *O. cristatus*; numerous names having been assigned to them separately and collectively, which, combined with the defectiveness of the descriptions accompanying them, have rendered it no easy task to unravel, and this being done, the result, I regret to say, is not very satisfactory; I believe, however, that Gmelin's description of the bird he has called *exilis* has reference to the species here figured, and hence it is the name adopted. M. Bourcier is of opinion that the birds figured on the 31st and 32nd Plates of Lesson's "Histoire Naturelle des Oiseaux Mouches" are identical with the present species; but I am inclined to consider them distinct, both from the *O. exilis* and *O. cristatus,* as I possess a bird intermediate between these two species, and which accords closely with Lesson's figures.

M. Bourcier and other French ornithologists give Martinique as one of the West Indian Islands in which it is found; and Mr. Cottle informs me that it also occurs in Nevis, that it frequents the low grounds, builds a small round compact nest, and lays two white eggs.

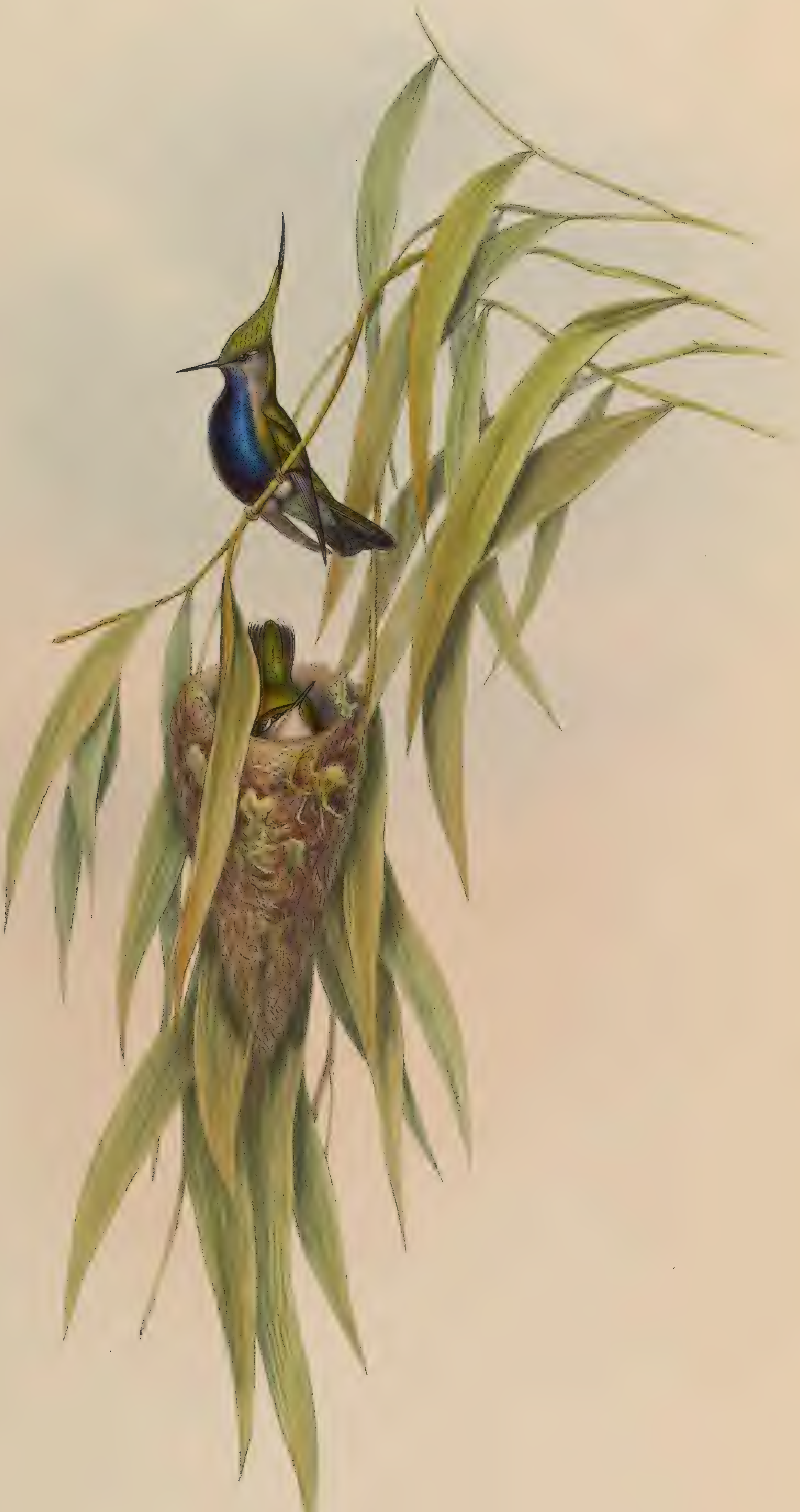
I possess a nest of this species, presented to me by M. Bourcier; it is a very diminutive cup-shaped structure, and is composed of cotton interspersed with involucres of some composite plant, bound together and attached to the upper side of a small twig with fine cobwebs.

The sexes of the present species, like those of *O. cristatus,* differ very considerably; the female being destitute of the crest, and of a light smoky-grey on the under surface.

The male has the forehead and crown golden-green, blending with the blue-green of the elongated crest-feathers; sides and back of the head, upper surface of the body, wing- and tail-coverts dark bronzy-green; wings purplish-brown; two centre tail-feathers dark bronzy-green, the remainder purplish-black; under surface dark or smoky-brown, with a wash of grey on the throat; bill and feet blackish-brown.

The female has the head, all the upper surface, wing- and tail-coverts and two centre tail-feathers bronzy-green; the lateral tail-feathers purplish-black tipped with grey; throat and under surface pale smoky-brown.

The Plate represents two males, a female and a nest, all of the size of life.



CEPHALEPIS LALANDI.

J Gould and H C Richter del et lith

Hullmandel & Walton Imp

CEPHALEPIS DELALANDI.

De Lalande's Plover-crest.

Trochilus Delalandi, Vieill. Nouv. Dict. d'Hist. Nat. 2nde Edit., tom. xxiii. p. 427, pl. G 36. fig. 3.—Ib. Ency. Méth. Orn., part ii. p. 558.—Ib. Ois. dor., tom. iii. ined. pl. 7.—Temm. Pl. Col. 18. fig. 1, 2.—Valenc. Dict. Sci. Nat., tom. xxxv. p. 492.—Drapiez, Dict. Class. d'Hist. Nat., tom. iv. p. 322.—Less. Man. d'Orn., tom. ii. p. 76.—Ib. Ind. Gen. et Syn. du Gen. Trochilus, p. xxx.—Swains. Birds of Brazil, pl. 22.—Jard. Nat. Lib. Humming Birds, vol. i. p. 101. pl. 10; vol. ii. p. 59. pl. 7.

Ornismya Delalandi, Less. Hist. Nat. des Ois. Mou., p. 95. pls. 23 & 24; Supp. p. 136. pl. 19.—Ib. Les Troch., p. 113. pl. 41.

Trochilus versicolor, Vieill. Nouv. Dict. d'Hist. Nat., tom. xxiii. p. 430.—Ib. Ois. dor., tom. iii. ined. pl. 12.—Ib. Ency. Méth. Orn., part ii. p. 560.

Mellisuga Delalandi, Gray and Mitch. Gen. of Birds, vol. i. p. 114, *Mellisuga,* sp. 99.

Cephalepis lalandii, Bonap. Consp. Gen. Av., p. 83, *Cephalepis,* sp. 1.—Ib. Consp. Troch. in Rev. et Mag. de Zool. 1854, p. 256.

The southern portion of Brazil is the true habitat of this graceful species of Humming-Bird, which was first discovered by MM. Delalande and Ménétrier, to the former of whom it has been dedicated. Mr. Reeves informs me that it inhabits Rio de Janeiro, Minas Geraes, and Santa Catherina, but he was unaware whether it remains in those provinces all the year or not.

The lengthened crest, which adds so much to the beauty and elegance of the *Cephalepis Delalandi,* terminates in a single elongated plume,—a very remarkable circumstance, since the feathers of birds are usually arranged in pairs.

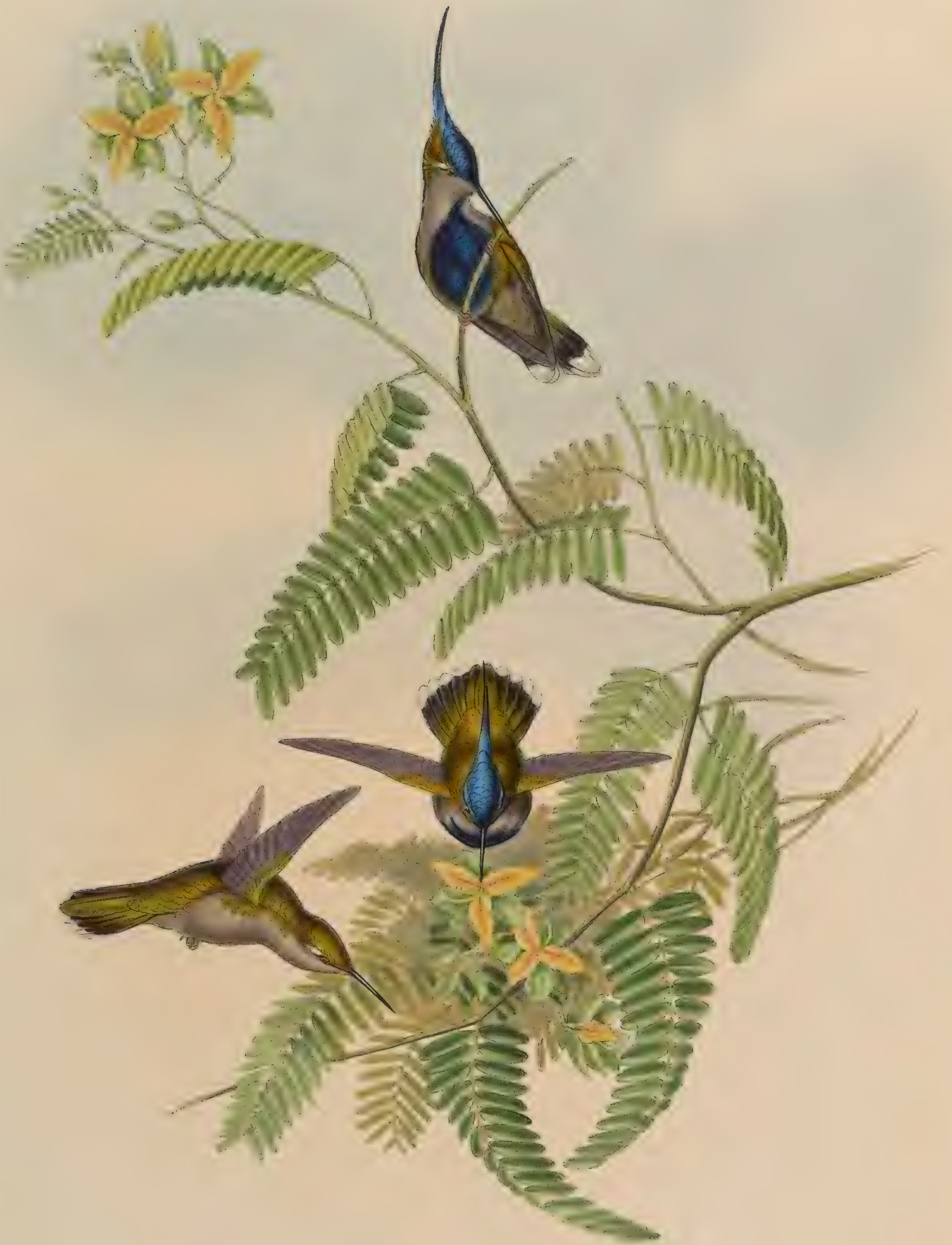
I possess two nests of this species, one of which was kindly forwarded to me by Mr. Reeves of Rio de Janeiro. One is of a much more lengthened form than the other, but both are composed of the same materials, namely fine fibrous roots, moss, lichens, and involucres of a composite plant, the whole matted together with spiders' webs of so fine a kind that they are almost imperceptible; both had been suspended among the fine twigs of a species of Bamboo.

A marked difference occurs in the colouring of the sexes, the lengthened glittering crest and rich azure-blue breast which render the male so conspicuous, being wholly wanting in the female.

The male has the forehead, crown, and shorter feathers of the crest glittering grass-green; lengthened crest-plume black; upper surface and wing-coverts shining green with bronzy reflexions; behind the eye a small spot of white; wings purplish brown; central tail-feathers green; the remainder greenish at the base, passing into black near the end, and fading at the tip to greyish white; on the lateral feathers the extent of the greenish hue lessens as the feathers recede from the centre; chin, sides of the chest, flanks and under tail-coverts brownish grey; centre of the throat, breast and abdomen intense shining violet-blue; under tail-coverts grey, glossed with green; bill black.

The female has the head and upper surface green with bronzy reflexions, a mark of white behind the eye; all the under surface dull greyish brown; central tail-feathers golden green, the remainder green at the base, passing into dull black, the outer one largely and the remainder slightly tipped with white.

The figures represent a male, a female, and a nest, of the natural size.



CEPHALEPIS LODDIGESI.

J. Gould and H.C. Richter del & lith.

Hullmandel & Walton Imp.

CEPHALEPIS LODDIGESI, *Gould.*

Loddiges' Plover-crest.

Trochilus Loddigesii, Gould in Proc. of Comm. of Sci. and Corr. of Zool. Soc., part i. p. 12. —Less. Les Troch., p. 138. pl. 51.—Jard. Nat. Lib. Humming Birds, vol. ii. p. 57. pl. 6.—Less. Ind. Gen. et Syn. du Gen. Trochilus, p. xxx.

——— *opisthocomus,* Licht. Ermann, Verz. von Thier. und Pflanz., p. 6. t. 2. fig. 3.

Mellisuga Loddigesii, Gray and Mitch. Gen. of Birds, vol. i. p. 114, *Mellisuga,* sp. 100.

Cephalepis loddigesi, Bonap. Consp. Gen. Av., *Cephalepis,* sp. 2.—Ib. Consp. Troch. in Rev. et Mag. de Zool. 1854, p. 256.

The specific name of *Loddigesi* was given to this bird by myself in 1830, when characterizing a specimen said to have been sent from Rio Grande. At this distance of time, my memory does not tell me how I became possessed of this fine bird, or what authority I had for the locality in which it was said to have been found; the specimens I have since received were collected, I believe, in Minas Geraes, but the only point that is certain respecting them is, that they came to me by way of Rio de Janeiro.

In dedicating this, the first Humming Bird I had the pleasure of describing, to Mr. George Loddiges, I was anxious to pay a just tribute of esteem to an old friend, and to one who was the first to take up the study of the *Trochilidæ* in a scientific manner. Had his valuable life been spared, no one would have been more delighted than himself with the many beautiful accessions to the group acquired during the last few years.

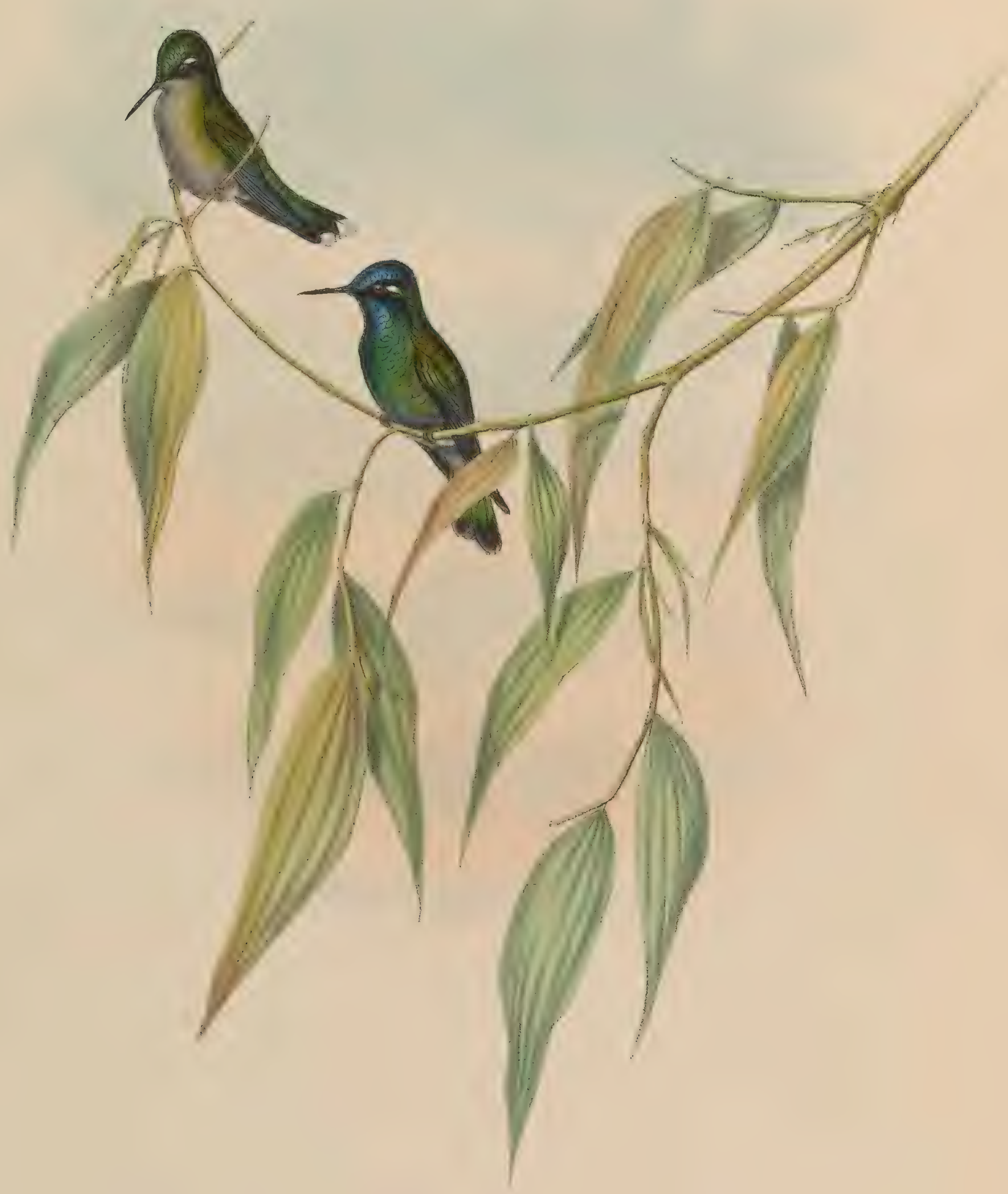
The *Cephalepis Loddigesi* differs in many particulars from the older known *C. Delalandi,* especially in its more lengthened bill, its violet-coloured crest, and the greater amount of white on the tips of the tail-feathers.

The female, on the other hand, offers so close a resemblance to that of *C. Delalandi,* as to be scarcely distinguishable.

The male has the forehead, crown, and shorter feathers of the crest shining lilaceous blue; lengthened crest-plume black; upper surface and wing-coverts bronzy green; wings purplish brown; central tail-feathers bronzy green, the remainder bronzy green at the base, passing into black near the extremity and tipped with white, the white increasing in extent as the feathers recede from the centre; behind the eye a small oval patch of white; chin, sides of the neck, flanks, vent, and under tail-coverts brownish grey; centre of the breast and abdomen very dark blue; bill brownish black.

The female has the whole of the upper surface bronzy green; a small patch of white behind the eye; under surface dull greyish brown; wings and tail as in the male.

The Plate represents both sexes of the size of life.



KLAIS GUIMETI.

J. Gould and H. C. Richter, del. et lith.

Hullmandel & Walton, Imp.

KLAIS GUIMETI.

Guimet's Flutterer.

Trochilus Guimeti, Bourc. et Muls. Ann. de la Soc. Sci. de Lyon, tom. vi. 1843, p. 38. pl. 2.—
Ib. Rev. Zool. 1843, p. 72.
Hylocharis Guimeti, Gray and Mitch. Gen. of Birds, vol. i. p. 114, *Hylocharis,* sp. 33.
Klais Guimeti, Reich. Aufz. der Col., p. 13.
Myiabeillia guimeti, Bonap. Rev. et Mag. de Zool. 1854, p. 253.

This highly curious and interesting little Humming-bird stands quite alone among the numerous species of the great family of the *Trochilidæ,* presenting, as it does, so many peculiar characters, that it is not easy to say to which of the genera it is most nearly allied: perhaps that of *Myiabeillia* is the one to which it presents the greatest affinity. Its native country is the Caraccas, whence numerous specimens were brought by the late Mr. David Dyson. I believe its habitat to be somewhat limited, and that it is probably confined to the secondary hills which stretch away to the eastward of the great Columbian ranges. Besides the Caraccas, Dr. Reichenbach states that the countries of Columbia, Venezuela, and Veragua are visited by it; and such is probably the case, as it certainly occurs, although but sparingly, in collections from Bogota.

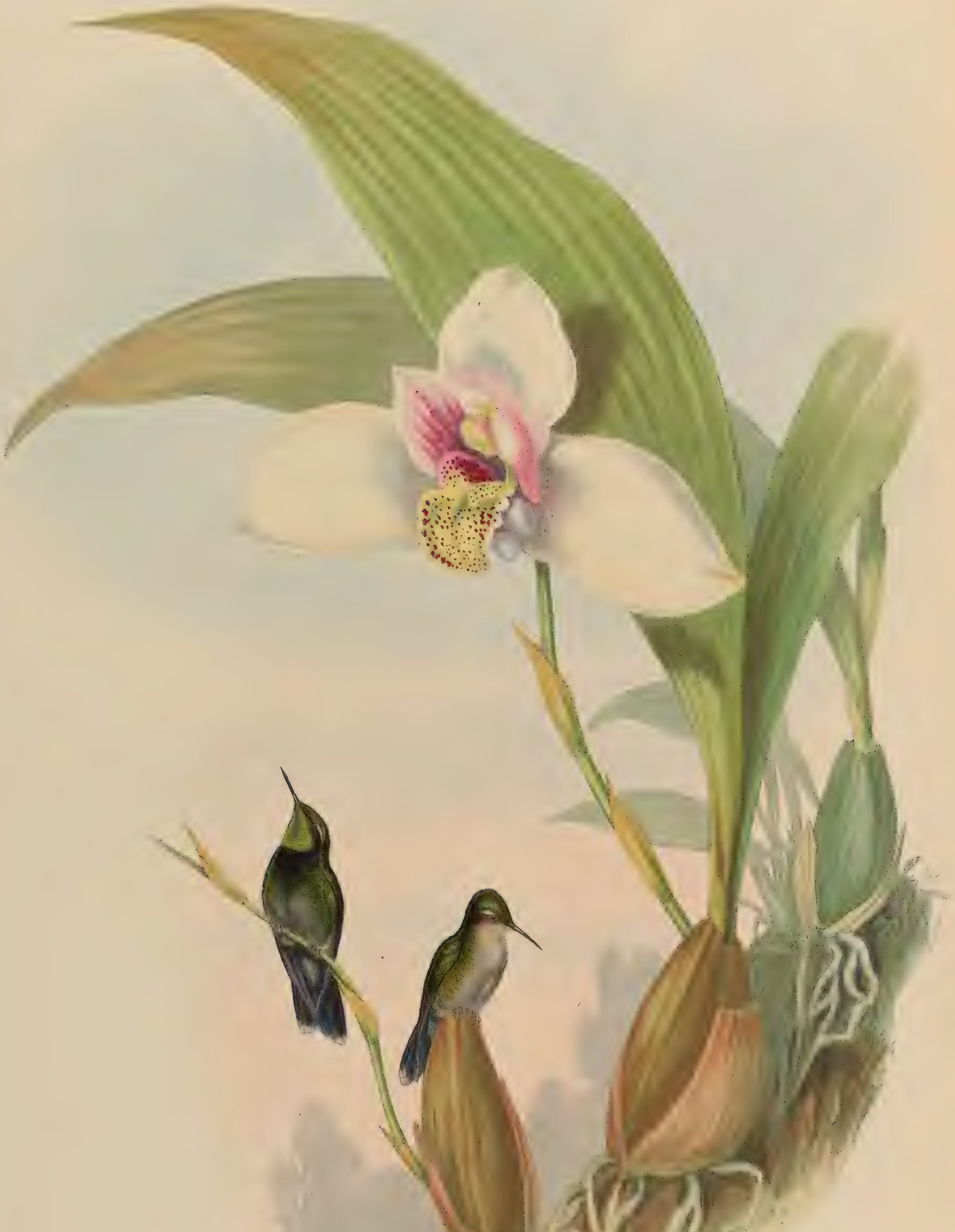
MM. Bourcier and Mulsant have dedicated this species to M. Guimet, a chemist of Lyons, the inventor of a peculiar blue which bears his name.

The sexes are very dissimilar, the female being dressed in a dingy garb as compared with that of the male. The accompanying drawing and the following descriptions will fully illustrate the sexes and the differences of their colouring.

The male has the head, face and throat very deep rich blue; all the upper surface, wing- and tail-coverts green; wings purplish-brown; under surface dull bronzy-green; two centre tail-feathers bronzy-green, the remainder bronzy-green at the base, then dull black, and slightly tipped with grey; behind the eye a small mark of pure white; bill black; feet dark brown.

The female has the crown of the head slightly tinged with bluish-green; upper surface golden-green; wings purplish-brown; tail as in the male, but the lateral feathers more largely tipped with grey; all the under surface grey, glossed on the sides of the neck and flanks with bronze.

The Plate represents the sexes of the natural size.



MYIABEILLIA TYPICA.

J Gould and H C Richter, del. et lith

Hullmandel & Walton Imp

MYIABIELLIA TYPICA.

Abeille's Flutterer.

Trochilus Abeillei, De Latt. et Less. Rev. Zool. 1839, p. 16.
Mellisuga Abeillei, Gray and Mitch. Gen. of Birds, vol. i. p. 112, *Mellisuga,* sp. 37.
Ramphomicron abeillii, Bonap. Consp. Gen. Av., p. 79, *Ramphomicron,* sp. 4.
Myiabeillia typica, Bonap. Consp. Troch. in Rev. et Mag. de Zool. 1854, p. 253.

"This species," says M. De Lattre, "usually confines itself to the forests, but also seeks its food among the wild flowers in the vicinity of Jalapa. Its flight is airy and buoyant, not unlike that of some of the moths. In its habits it is very unsociable, and the least thing alarms it."

That it enjoys a wide range of habitat is certain, as, besides being found near Jalapa, as mentioned by M. De Lattre, I have lately received from George Ure Skinner, Esq., now (1854) resident in Guatemala, examples of both sexes, which had been killed in Coban by M. Riviera Paz, a young Guatemalan naturalist of very promising attainments.

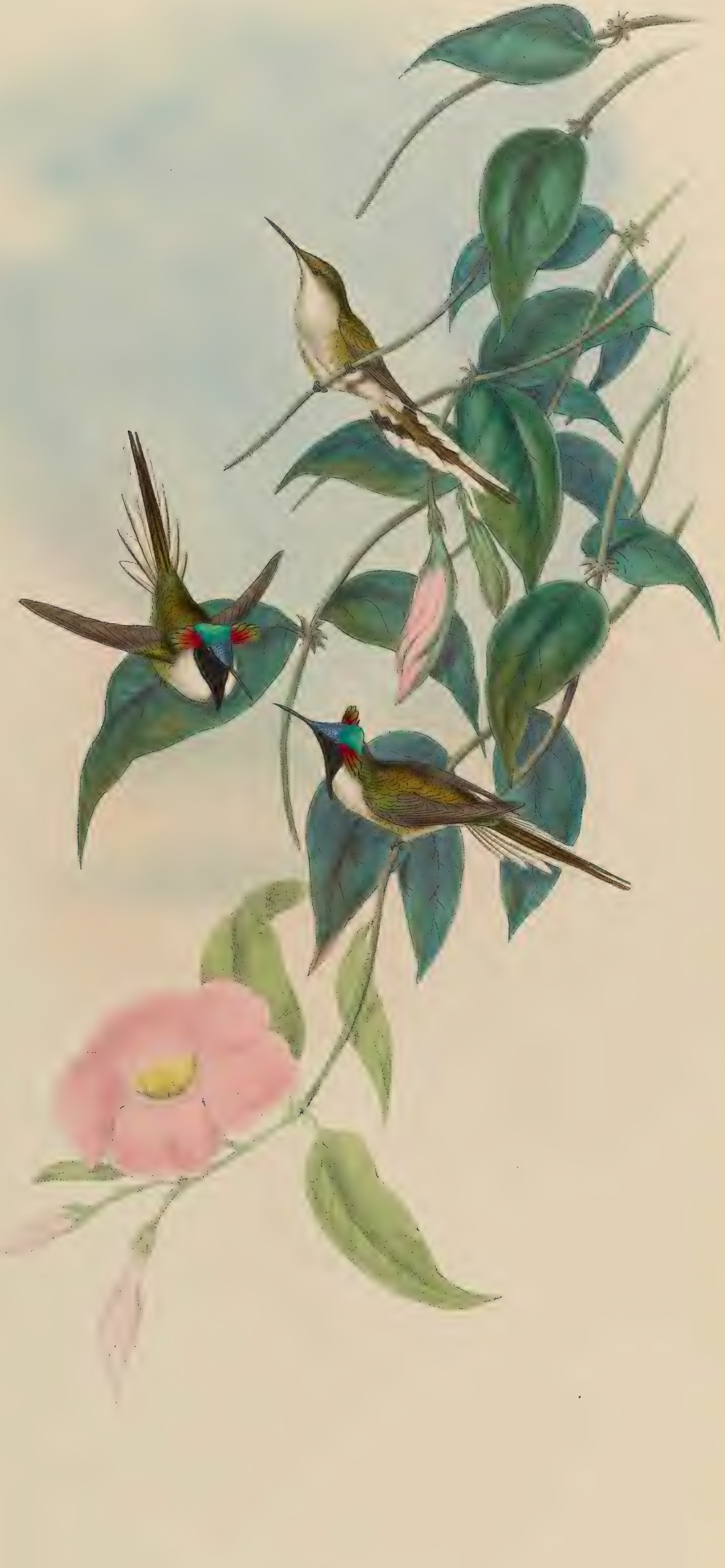
Mr. Skinner has been well known for many years to the lovers of botany, as one to whom they are greatly indebted for unfolding the botanical riches of South America, and especially of Guatemala. At my request he has now kindly consented to pay as much attention as circumstances will admit to the lovely group of birds forming the subject of the present work, and some of the interesting species which I have recently obtained, have been procured through his instrumentality. Two branches of science having therefore been promoted in no slight degree by his energies, I have much pleasure in figuring the present pretty Humming-Bird, with the exquisite orchid named *Lycaste Skinneri* in honour of this gentleman.

The *Myiabeillia typica,* as its name implies, is the first species of the form that has been named; indeed it is the only one of the genus that has yet been discovered. In point of beauty this bird has but little to recommend it, a small patch of glittering green on the throat being all the metallic or brilliant colouring with which it is decorated.

The male has the head, wing-coverts, upper surface, two central tail-feathers, sides of the neck and flanks dark bronzy grass-green; wings purplish brown; lateral tail-feathers black, tipped with grey; on the throat a patch of brilliant grass-green; centre of the chest dull black; abdomen ashy grey; under tail-coverts pale green, edged with dark grey.

The female differs in having the whole of the under surface brownish grey.

The figures represent the two sexes of the size of life.



HELIACTIN CORNUTA.

J. Gould and H. C. Richter, del. et lith.

Hullmandel & Walton, Imp.

HELIACTIN CORNUTA.

Sun Gem.

Trochilus cornutus, Pr. Max. Beitr. zur Naturg. von Bras., p. 99.—Jard. Nat. Lib. Humming Birds, vol. i. p. 122. pls. 21, 22.
——— *dilophus*, Vieill. Ency. Méth. Orn., part ii. p. 573.
——— *bilophus*, Temm. Pl. Col. 18. fig. 3.—Less. Man. d'Orn., tom. ii. p. 76.
Ornismya chrysolopha, Less. Hist. Nat. des Ois. Mou., p. 55. pls. 7, 8.—Ib. Supp. p. 162. pl. 32.—Ib. Traité d'Orn., p. 276.
Mellisuga bilopha, Steph. Cont. of Shaw's Gen. Zool., vol. xiv. p. 251. pl. 30.
Heliactin cornuta, Boie, in Oken's Isis, 1831.
——— *cornutus*, Bonap. Consp. Gen. Av., p. 85.—Ib. Rev. et Mag. de Zool. 1854, p. 256.
Mellisuga cornuta, Gray and Mitch. Gen. of Birds, vol. i. p. 113, *Mellisuga*, sp. 67.
Heliactinia chrysolopha, Reichenb. Aufz. der Colibris, p. 12.—Ib. Troch. enumer., p. 9.

Every enthusiastic naturalist, when studying the productions of that vast portion of the globe which we comprehensively term the "Continent of America," becomes amazed at the prodigality with which Nature has lavished her treasures throughout the temperate and more especially the intertropical regions of that enormous expanse of land. It matters little whether he direct his attention to its flora or its fauna,—let him turn to whatever department of science he may, he becomes enchanted with the prospect around him,—everywhere the utmost variety is presented, and all is beautiful in the extreme;—the inexhaustible stores of minerals, the varied forms of the Orchidaceous and other curious plants, the splendour of the insects and the beauty of the birds which give life to the forests, call forth his admiration. In the physical geography of the country, too, an equal variety exists,—vast plains, great rivers bordered with interminable forests, and towering Cordilleras, each giving birth to a distinct flora and a distinct fauna; and not only so, but at different elevations, even in the same latitudes, to species and even genera which are not to be found elsewhere. These remarks might be extended to a much greater length; but as the subject will be found more fully treated of in another part of the work, it would be out of place to comment at large upon them here. It would be very gratifying to me to give some information respecting the habits and economy of this bird; but unfortunately all that is known respecting it is, that it is an inhabitant of the mountain-ranges of Brazil, particularly those of Minas Geraes; and well does this elegant little bird represent in the air the brilliants which lie hidden in the deep primitive rocks over which it flies: fairy-like in form and colour, we might easily imagine that one of the jewels had become vivified and had taken wing.

For the discovery of this remarkable species we are indebted to the researches of His Highness the Prince Maximilian of Wied, who first described it in his "Voyage to Brazil" under the name of *Trochilus cornutus*, and who states that it inhabits the exalted Campos Geraes of Brazil, near the sources of the river San Francisco. Mr. Reeves informs me that Minas Geraes is the only province from which he had received specimens.

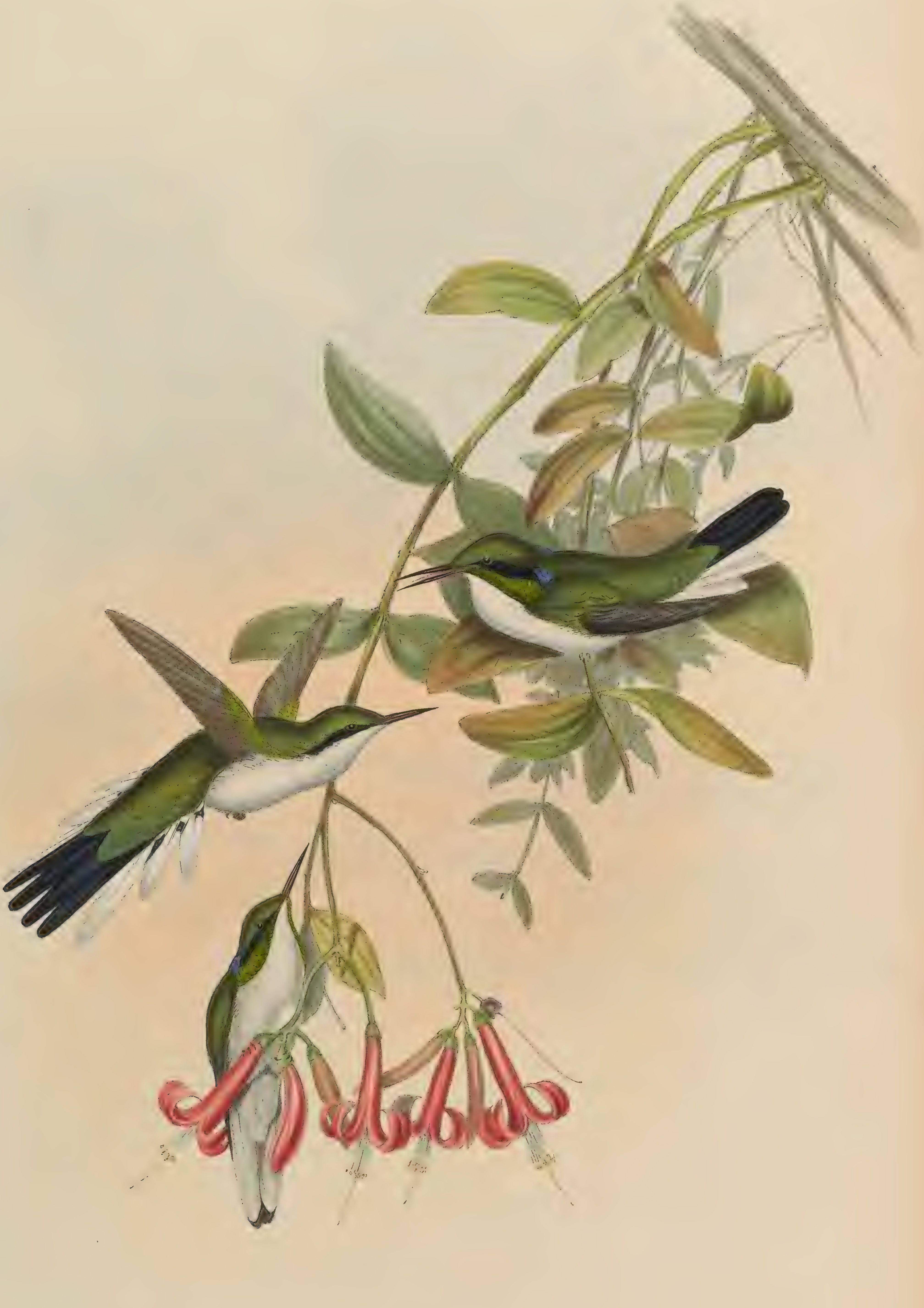
M. Bourcier states, that "during the dry season it principally frequents the open country in the neighbourhood of marshes, and obtains its food from the small plants which there abound; and that it re-enters the woods during the rainy season, and then seeks its food among the flowers of the various Orchids. It is in the district of the river of St. Francisco du Nord, in the province of Minas Geraes, that it is found in abundance."

The sexes differ very considerably both in colour and in size, the female being somewhat the largest, having a much longer tail, and being destitute of the beautiful tufts and black throat which form such conspicuous features in the male.

The male has the forehead and crown shining greenish blue; above and behind the eye a series of elongated feathers of the richest fiery crimson at the base, passing into greenish yellow at the tip; throat, sides of the face, and a narrow tuft depending from the base of the throat, deep velvety black; back and wing-coverts bronzy green; wings purplish brown; two centre tail-feathers pale olive-brown, the remainder white, edged externally with olive-brown; breast, sides of the neck, and upper part of the abdomen pure white; lower part of the abdomen and flanks bronzy green; bill black; feet brownish black.

In the female all the upper surface and flanks are dull bronzy green; throat and centre of the abdomen buffy white; two centre tail-feathers bronzy olive-green, the next on each side white, edged with green on the base of the inner web, beyond which both webs are crossed obliquely with black; the remaining feathers white, crossed about the centre by a broad oblique band of black; wings purplish brown; bill and feet as in the male.

The Plate represents two males and a female of the size of life. The plant is the *Dipladenia crassinoda*.



J Gould and H C Richter, del et lith.

HELIOTHRIX AURITUS.

[illegible]

HELIOTHRIX AURITUS.

Cayenne Fairy.

Trochilus auritus, Gmel. Edit. Linn. Syst. Nat., tom. i. p. 493.—Lath. Ind. Orn., tom. i. p. 311. —Vieill. Nouv. Dict. d'Hist. Nat., tom. vii. p. 368.—Ib. Ency. Méth. Orn., part ii. p. 567.—Swains. Birds of Brazil, pl. 29.

Mellisuga Cayennensis major, Briss. Orn., tom. iii. p. 722. pl. xxxvii. fig. 3.—Id. 8vo, tom. ii. p. 38.

Oiseau mouche à oreilles, Buff. Hist. Nat. des Ois., tom. vi. p. 32.—Vieill. Ois. dor., tom. i. p. 57. pls. 25, 26.

Violet-eared Humming-bird, Lath. Gen. Syn., vol. ii. p. 767.—Shaw, Nat. Misc., vol. xiii. pl. 977.—Lath. Gen. Hist., vol. iv. p. 341.

Ornismya aurita, Less. Hist. Nat. des Ois. Mou., p. 63. pls. 10, 11.

Heliothrix auritus, Boie, Gray and Mitch. Gen. of Birds, vol. i. p. 115, *Heliothrix*, sp. 1.—Bonap. Consp. Gen. Av., p. 69, *Heliothrix*, sp. 1.

Heliothrix aurita, Gray, List of Gen. of Birds, 2nd edit. p. 18.

Ornismya nigrotis, Less. Ind. Gen. et Syn. des Ois. du Gen. Trochilus, p. 20. esp. 48.

Heliothrix nigrotis, Gray and Mitch. Gen. of Birds, vol. i. p. 115, *Heliothrix*, sp. 2.—Bonap. Consp. Gen. Av., p. 69, *Heliothrix*, sp. 2.

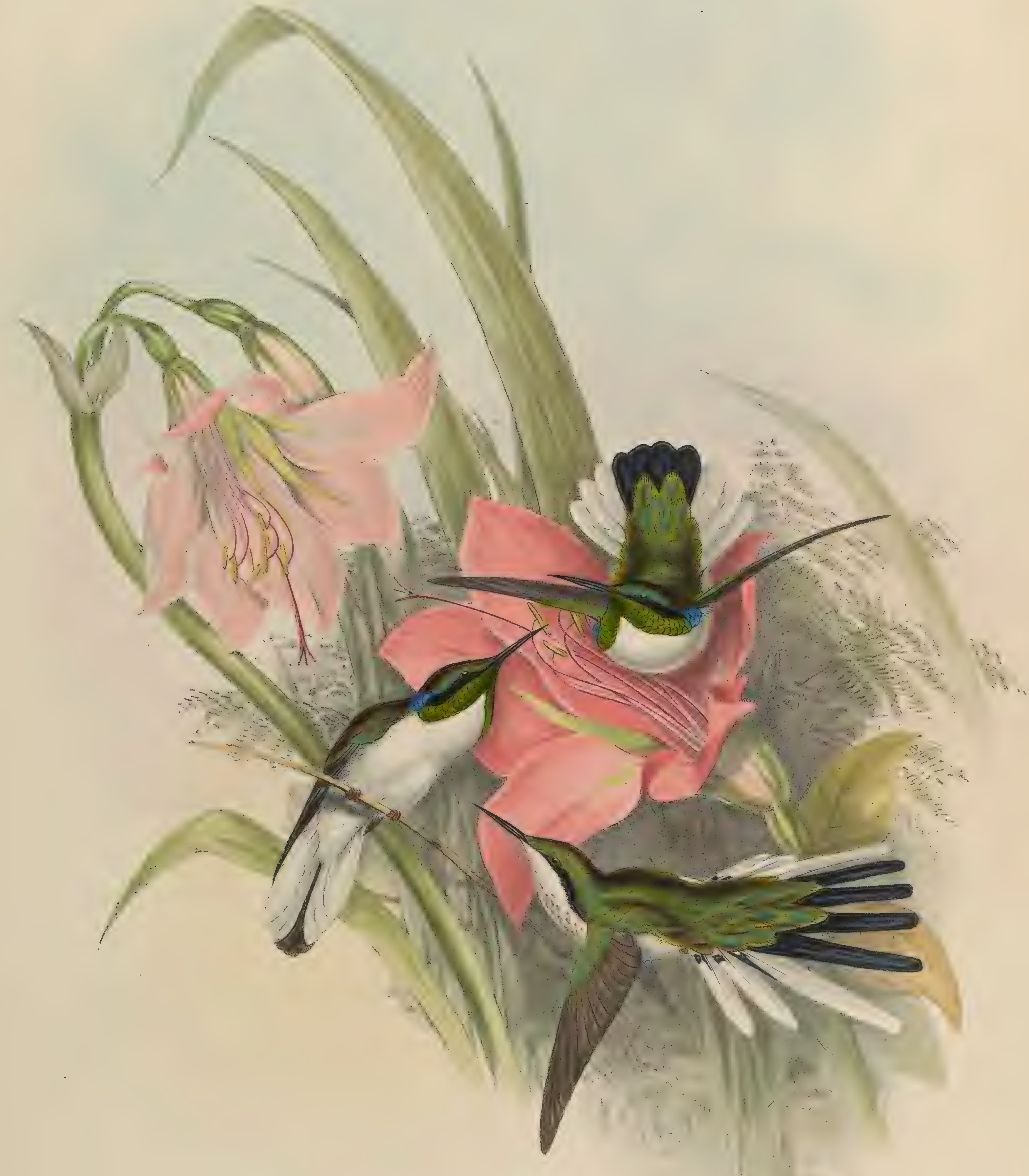
As this has been the longest known species of the present genus, I place it at the head of a group, for which the trivial name of Fairy will be very appropriate, since the elegance of their form and the peculiar chasteness of their colouring readily recall to memory the ideas of grace and beauty connected with those imaginary beings. The native habitat of the present species is the countries of Guiana and Cayenne, and the forests near the mouths of the Amazon. I have never seen examples from the southern portion of Brazil, where its place appears to be supplied by a nearly allied species, the *H. auriculatus*: both the *H. auritus* and its near ally appear to be subject to much diversity in the length of their tails, and in the colouring of the sides of their necks, a diversity which I candidly confess much perplexes me, as I have never been able to satisfy myself as to what it is due: I have always regarded the specimens with the more lengthened tail and black ear-coverts as females; and if such be the case, of which I have little doubt, the young males will present for the first two years similar characteristics; my reason for believing this is, that specimens having metallic whiskers and the blue patch on the sides of the neck, have in some instances lengthened tails, in others comparatively short ones; it would therefore seem that as the birds advance in age, the organ becomes more abbreviated and of a rounder form: there is also another character which cannot fail to have been noticed by every Trochilidist, namely, that the breast in some examples of these females or young males is pure white, while in others the same part is dotted over with obscure markings of pale bronzy brown; an elucidation of these difficulties is a point to which I would direct the attention of those who may be favourably situated for observing any member of this genus in its native wilds. Some persons are inclined to believe that a seasonal change takes place in many of the Trochilidæ, while others believe the contrary to be the case. In the present instance I think I have had evidence that the metallic whisker and blue mark on the side of the neck is cast off after the breeding season, and that the black line commencing at the gape and running down the sides of the neck then becomes very conspicuous. M. Lesson has regarded the bird in this state as a distinct species, and given to it the appellation of *nigrotis*: if the opinion that the birds are subject to a seasonal change should prove to be erroneous, then I doubt not that the black-eared birds with the white breasts and long tails will prove to be adult females, and those with the spotted breasts will be birds in the first year of their existence.

The male has the crown of the head, all the upper surface, the lengthened upper tail- and the upper and under wing-coverts beautiful glossy golden green, which is brightest on the forehead; wings purplish black; four middle tail-feathers bluish black; three lateral feathers snow-white; lores, line under the eye and ear-coverts black, terminating in a small tuft of violet-blue feathers; below the black line a narrow moustache proceeding from the gape of rich luminous green; all the under surface snow-white; bill black; feet flesh-colour.

The female differs in having the upper surface of a more bronzy hue, in wanting the luminous forehead, the green moustache and the blue ear-tufts; the absence of the two latter causing the black streak down the neck to show conspicuously, and in having an oblique band of bluish black across the white lateral tail-feathers near their base.

The young bird resembles the female, except that each of the feathers of the throat and breast has a pale bronzy brown spot at the tip.

The figures are of the size of life.



HELIOTHRIX AURICULATUS.

J. Gould and H. C. Richter, del. et lith. *Hullmandel & Walton Imp.*

HELIOTHRIX AURICULATUS.

Brazilian Fairy.

Trochilus auriculatus, Licht. Erman Verz. von Thier., p. 5. t. 2. figs. 1, 2.
Ornismya Pouchettii, Less. Rev. Zool. 1840, p. 72.
Heliothrix auriculatus, Gray and Mitch. Gen. of Birds, vol. i. p. 115, *Heliothrix*, sp. 3.
Heliothrix poucheti, Bonap. Consp. Gen. Av., p. 69, *Heliothrix*, sp. 3.

Dr. Lichtenstein's name of *auriculatus* having been given to this species prior to that of *Poucheti* bestowed upon it by M. Lesson, is necessarily the one adopted, although the species is more generally known by the latter; had this not been the case, I should have felt great pleasure in retaining the term selected by M. Lesson to do honour to the amiable and accomplished Dr. Pouchet of Rouen.

It will be seen that in my account of the *H. auritus* I have stated that it is a native of Guiana and Cayenne; this species, on the other hand, inhabits Southern Brazil, and I do not believe that either species encroaches upon the other's territories, but that each is confined to their respective countries.

The *H. auriculatus* is a larger and more robust species than *H. auritus* or *H. Barroti*, from both of which it may be readily distinguished by the metallic green whisker occupying the throat as well as the sides of the neck; another remarkable feature is observable in some specimens, namely, that the tail is both shorter and more rounded than in others; the bird in fact appearing to be subject to the same diversity in this and other respects that I have mentioned in my account of *H. auritus.*

Mr. Reeves informs me that it inhabits Rio de Janeiro and Minas Geraes, but is nowhere very common; that it is not met with in the immediate vicinity of Rio, but that it arrives in Novo Friburgo in July, and remains until September: during its stay it evinces a decided preference for the flowers of the orange trees, which doubtless afford it an abundant supply of some peculiar and congenial kind of insect food: Mr. Reeves adds, that, as we might infer from its general contour, its flight is both powerful and rapid.

A nest sent to me by Mr. Reeves as belonging to this species, is labelled "*Colibri ventre blanc*; local name *Oreus azul*; cry *zook-zook-zook*."

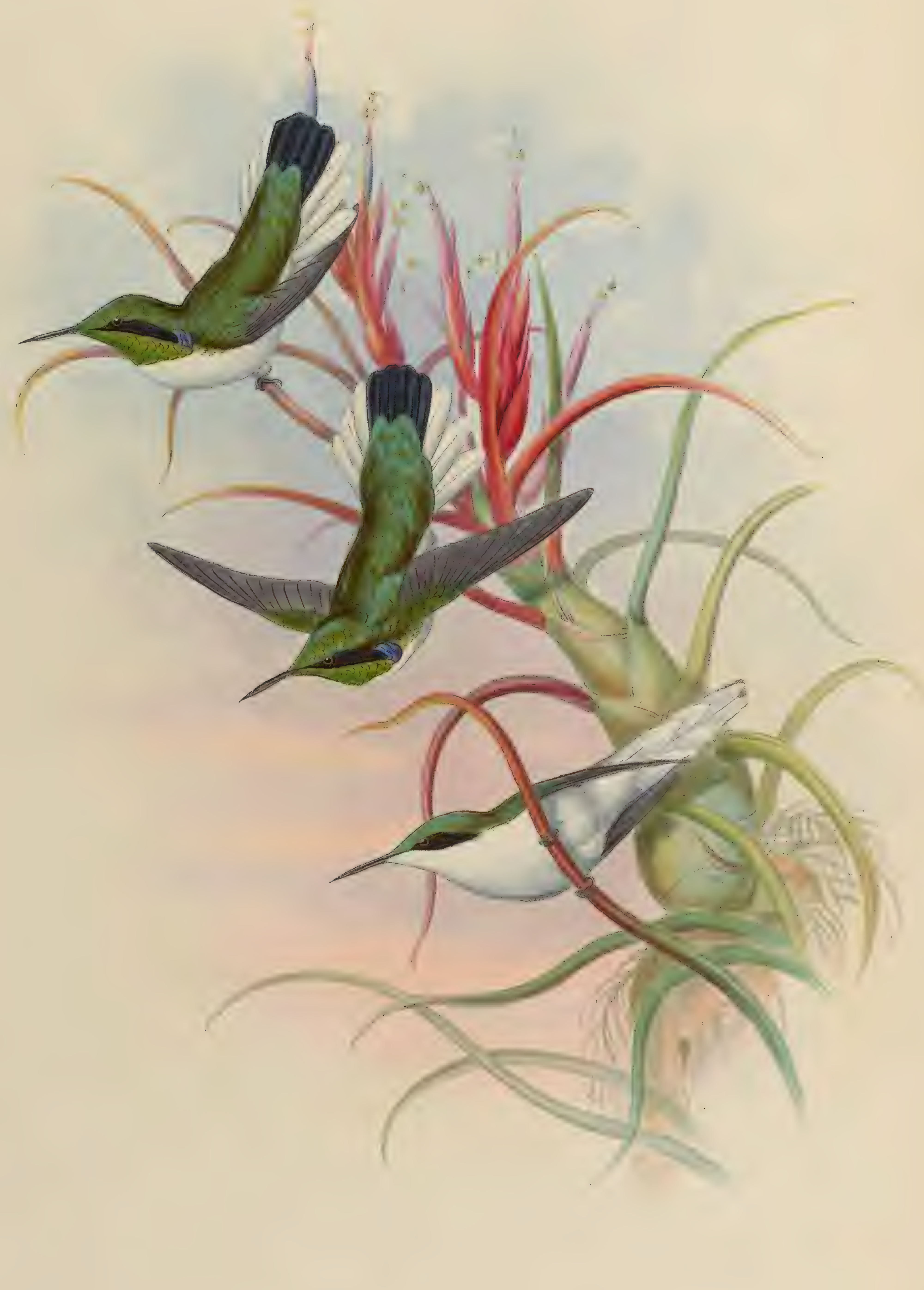
The nest is of a somewhat lengthened form, attached to the side of a small twig, composed of fine dark brown vegetable fibres, coated externally with small flakes of pale olive and buff-coloured bark. Another example is of a still longer form, attached on one side to a slender vertical twig, and composed of some cottony material held together externally by apparently cobwebs and patches of grey lichen.

The male has the head, all the upper surface, lengthened upper tail-coverts, upper and under wing-coverts rich golden green, very brilliant on the head; wings purplish black; four central tail-feathers bluish black, lateral tail-feathers snowy white; patch below and behind the eye black, terminating in a small tuft of violet-blue feathers; down each side of the neck a broad stripe of rich luminous green, the two stripes uniting on and occupying the chin; centre of the throat and all the under surface pure white; bill black; feet flesh-colour.

The female is similar in her general colouring, but is destitute of the brilliancy on the head, of the blue ear-tufts and the green neck stripes, the absence of which causes the black below the eye and on the ear-coverts to show very conspicuously: the lateral tail-feathers crossed near their base by a purplish band.

The young resemble the female, but have a spot of pale bronzy brown at the tip of each feather of the throat and breast.

The figures are of the natural size; the flower of the bulbous plant figured with them was sent to me by Mr. Reeves of Rio de Janeiro, and is introduced as offering a pleasing contrast to the birds rather than as one to which they are particularly attached.



HELIOTHRIX PHAÏNOLÆMA, *Gould.*

J. Gould and H. C. Richter, del. et lith.

Hullmandel & Walton, Imp.

HELIOTHRIX PHAÏNOLÆMA, *Gould.*

Green-throated Fairy.

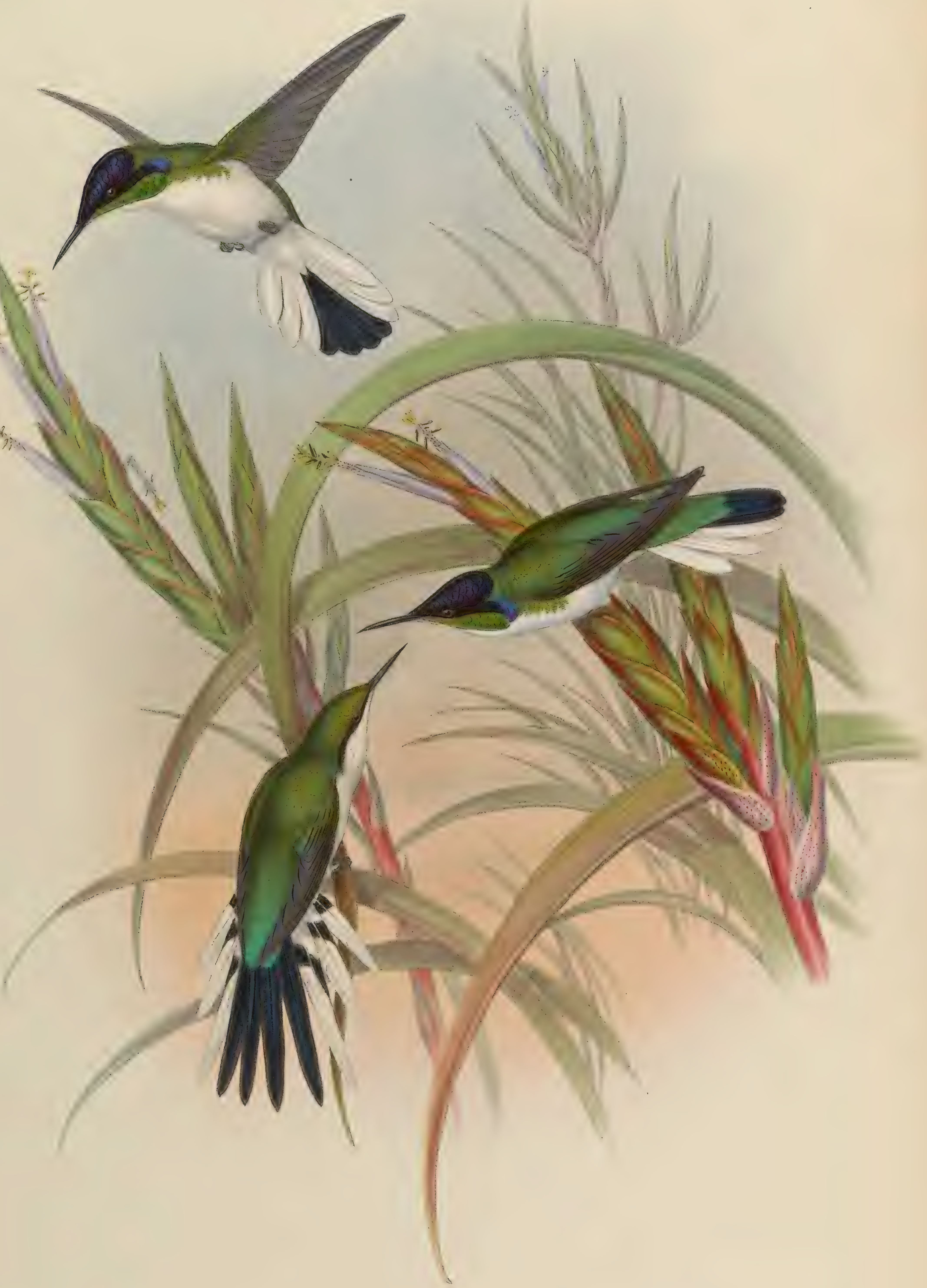
Heliothrix phaïnolæma, Gould in Proc. of Zool. Soc., part xxiii. p. 87.

This is one of the most beautiful, and certainly the rarest species of the genus *Heliothrix*, a group distinguished by the wedge-shaped form of their bill, their lengthened wings, small feet, and delicate style of colouring. Its nearest ally is the *H. auriculatus,* from which, however, it is distinguished by the whole of the throat being of a resplendent metallic green. The localities inhabited by the two birds are widely different, the *H. auriculatus* being found in Southern Brazil, while the *H. phäinolæma* frequents the distant country of the Upper Rio Negro, the district in which the splendid *Topaza pyra* is also found, together with many other fine species of which at present but little is known, owing to the difficulty of access to this *terra incognita.*

The male has the head, upper surface, upper tail-coverts, upper and under wing-coverts rich golden green, very brilliant on the head; wings purplish black; four central tail-feathers bluish black; lateral tail-feathers snowy white; below and behind the eye a lengthened mark of black, terminating in a violet-blue tuft; chin, throat, and sides of the neck rich luminous green; breast and under surface pure white; bill black; feet flesh-colour.

The female is very similar, but wants the blue ear-tufts and green neck-stripe, the absence of which causes the black ear-coverts to show very conspicuously; a purplish band crosses the lateral tail-feathers near their base.

The figures are of the natural size. The plant is a variety of the *Tillandsia bulbosa.*



HELIOTHRIX PURPUREICEPS, *Gould.*

J. Gould and H. C. Richter, del. et lith. *Hullmandel & Walton, Imp.*

HELIOTHRIX PURPUREICEPS, *Gould.*

Purple-crowned Fairy.

Heliothrix purpureiceps, Gould in Proc. of Zool. Soc., part xxiii. p. 87.

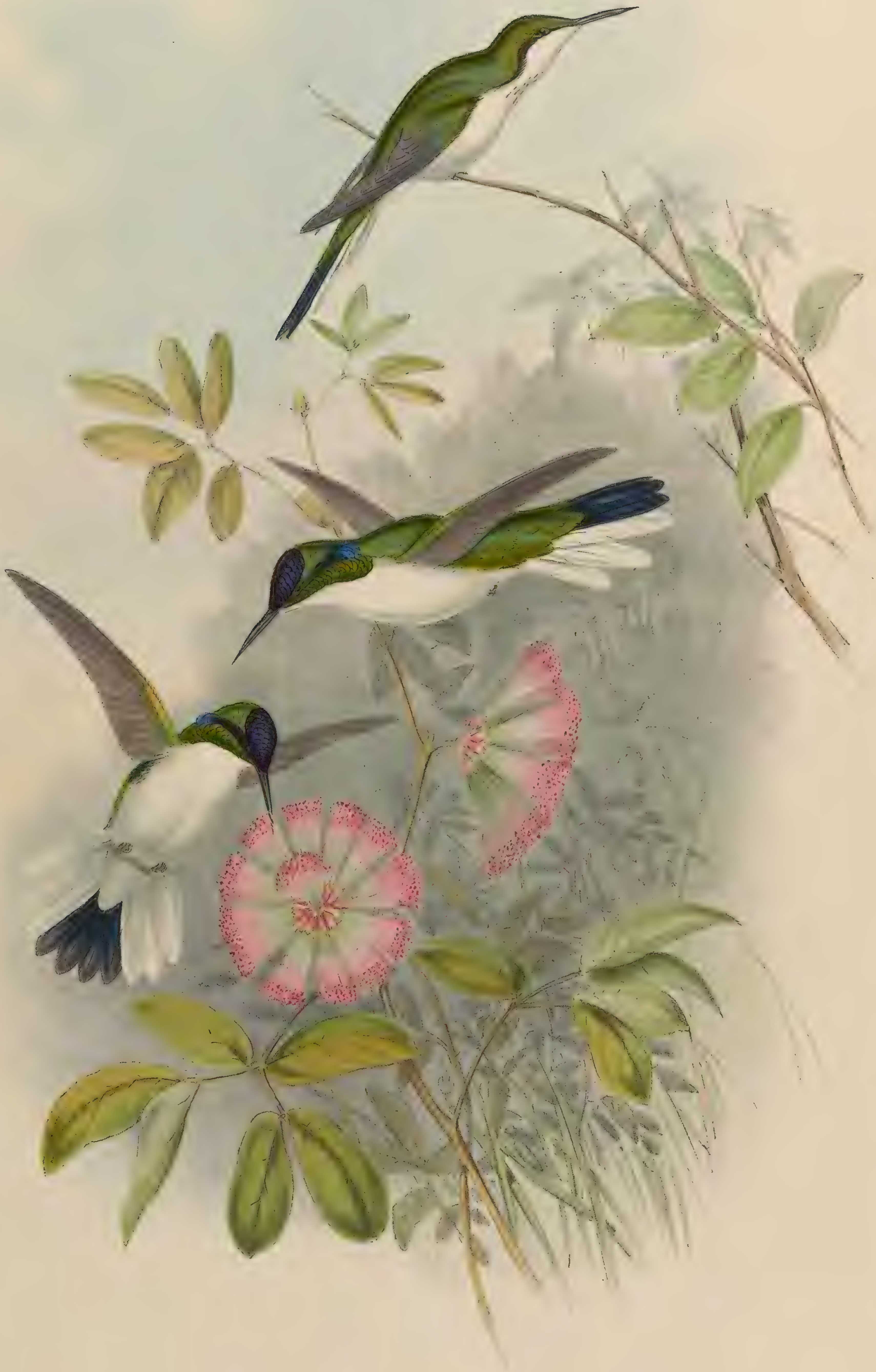
It will be seen, on reference to my description of *Heliothrix Barroti*, that I have stated Columbia and Carthagena to be the habitats of that species; on the other hand, the present bird, so far as is yet known, although inhabiting the same great range of mountains, is found further to the southward. The male specimen from which I took my description was procured at Popayan, while females, which I doubt not are referable to this species, were obtained by Professor Jameson in the neighbourhood of Quito. That the present bird is a species of the greatest rarity all ornithologists will admit, since but few, very few examples have as yet reached Europe. Of course nothing whatever is known respecting its habits and economy. In these particulars, however, we may with certainty aver, that no remarkable difference from those of its near allies will be found to exist. On comparing specimens of *H. purpureiceps* and *H. Barroti*, the following differences are observable: the bill and tail are much shorter, and the purplish blue, reaching as it does to the nape, is much more extensive in the former than in the latter.

The male has the forehead, crown, and nape beautiful purplish blue; upper surface, upper tail-coverts, and upper and under wing-coverts beautiful golden green; mark below the eye and ear-coverts black, terminating in a small blue tuft; below the black a streak of rich luminous green; wings purplish black; central tail-feathers bluish black; lateral tail-feathers, chin, throat, and under surface pure white; bill black; feet flesh-colour.

The female has the crown bronzy green instead of violet-blue; is destitute of the blue ear-coverts and green moustache; has the throat-feathers lightly speckled with brown, and the lateral tail-feathers banded near the base with purplish black.

On reference to my account of *H. Barroti*, it will be seen that I have stated that the females of that species were found at Quito; but I now believe that the females there obtained have reference to the present bird, and not to *H. Barroti.*

The figures are of the natural size. The plant is the *Vriesia glaucophylla.*



HELIOTHRIX BARROTI.

J. Gould and H. C. Richter, del. et lith.

Hullmandel & Walton Imp.

HELIOTHRIX BARROTI.

Columbian Fairy.

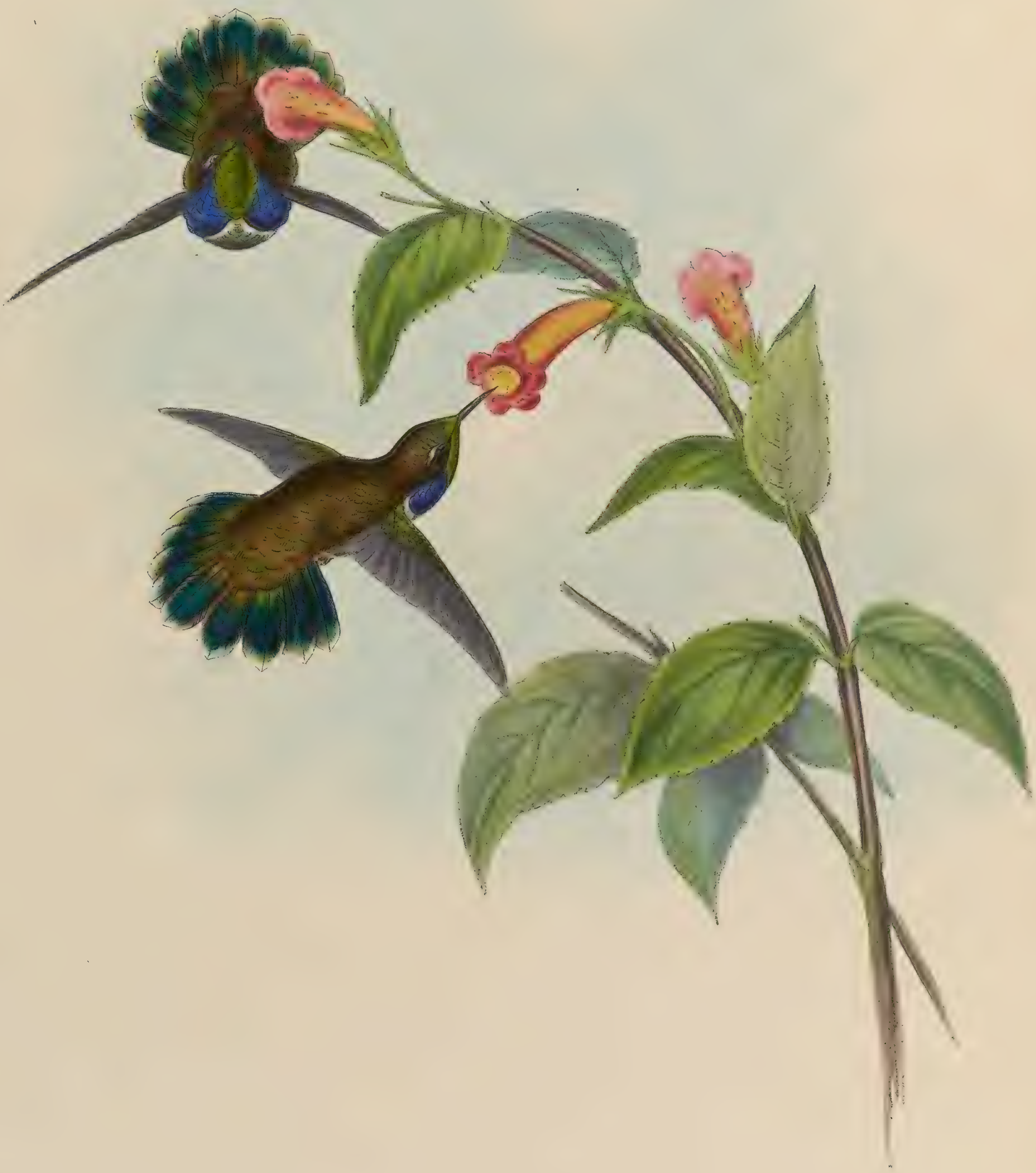
Trochilus Barroti, Bourc. Rev. Zool. 1843, p. 72.—Ib. Ann. Sci. Phys. &c. de Lyon, 1843, p. 48. t. 4.
Heliothrix Barroti, Gray and Mitch. Gen. of Birds, vol. i. p. 115, *Heliothrix,* sp. 4.
———— *barroti,* Bonap. Consp. Gen. Av., p. 69, *Heliothrix,* sp. 4.

This beautiful species is very rarely met with either in the collections of this country or in those of the Continent, a circumstance which is doubtless due to its natural habitat being seldom visited by travellers. M. Bourcier, its original describer, states that it inhabits Columbia and Carthagena, and I have myself received a male from M. Warszewicz, procured in Veragua, and a female from Professor Jameson of Quito, who shot it on the western side of Pichincha, at an elevation of 6000 feet; it is clear, therefore, that however scarce the bird may be in our collections at this time, it will not long remain so, since it cannot fail to be procured in abundance in some portion of its widely-extended range. It is evidently a tenant of the moderately high and temperate regions, where it is a representative of, and doubtless performs the same part in the economy of nature that the *H. auritus* and *H. auriculatus* do in the regions inhabited by them; it is perhaps even more beautiful than either of them, for independently of its possessing all the colours they display, the crown is capped with beautiful blue, a feature which renders it conspicuous and readily recognizable; in size, in its configuration, and in the whiteness of its throat it is more nearly allied to *H. auritus* than to *H. auriculatus.*

The male has the forehead beautiful violet-blue; nape, upper surface, upper tail-coverts and upper and under wing-coverts beautiful golden green; mark below the eye and the ear-coverts black, terminating in a small tuft of blue; below the black line a streak of rich luminous green; wings purplish black; central tail-feathers bluish black; lateral tail-feathers, chin, throat and under surface pure white; bill black; feet flesh-colour.

The female is similar in colour, but has the crown bronzy green instead of violet-blue; is destitute of the blue ear-coverts and green moustache; has the throat-feathers slightly speckled with brown, and the lateral tail-feathers banded near their base with purplish black.

The Plate represents the two sexes of the size of life.



SCHISTES GEOFFROYI.

J Gould and H C Richter, del et lith

Hullmandel & Walton Imp

SCHISTES GEOFFROYI.

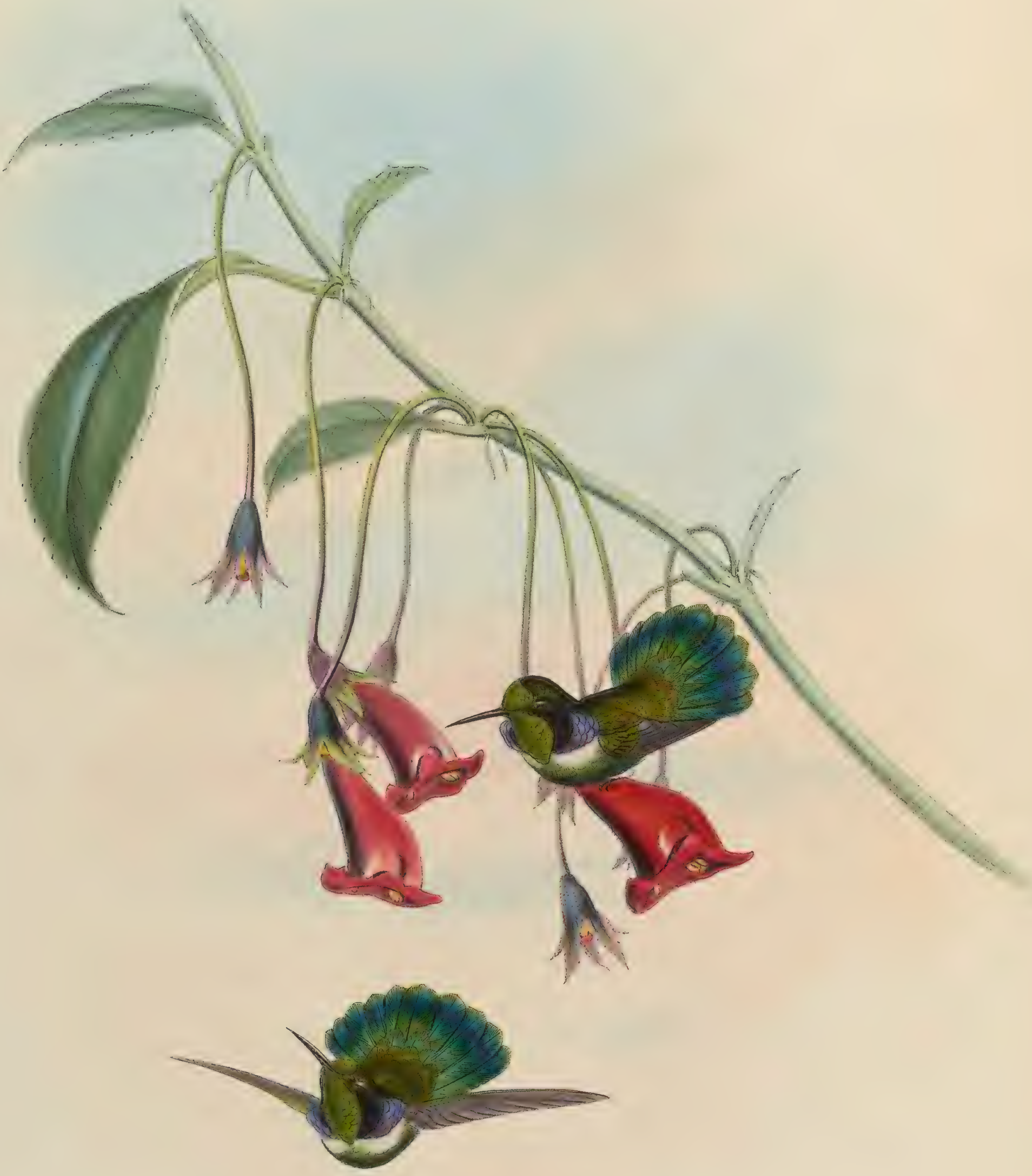
Geoffroy's Wedge-Bill.

Trochilus Geoffroyi, Bourc. et Muls. in Ann. de la Soc. Roy. d'Agric. de Lyon, tom. vi. 1843, p. 37. pl. 3.
Petasophora? Geoffroyi, Gould in Proc. of Zool. Soc., Part xv. p. 9.
Polytmus Geoffroyi, Gray and Mitch. Gen. of Birds, vol. i. p. 108, *Polytmus*, sp. 31.
Colibri geoffroyi, Bonap. Consp. Gen. Av., p. 69, *Colibri*, sp. 7.

This bird was first made known to us by MM. Bourcier and Mulsant in the Annals of the Royal Society of Agriculture, &c. of Lyons for 1843; fortunately for science it is one of the few species that has not received a second specific name, and hence all confusion as to its identity is obviated. In its singular wedge-shaped bill combined with the cuneate form of its tail, it differs from the members of all the previously established genera of this family; I have therefore deemed it advisable to make this bird the type of a new genus, and have selected the term of *Schistes* as indicative of one of the features by which it and its near ally, the *S. albogularis*, are distinguished. I feel certain that this peculiarity in the form of the bill is adapted for some especial purpose, and it would be highly interesting to know from what tribe of plants the bird gathers its insect food, of which, as well as all other details connected with its habits and economy, we are entirely ignorant; all that we know at present being that it is a native of the Columbian Andes, and that specimens are frequently sent to France in collections from Santa Fé de Bogota. I am not aware that there is any distinctive sexual colouring in the plumage of this bird, a great similarity existing in all the specimens I have examined.

Across the forehead a faint line of luminous green; crown of the head, upper surface and wing-coverts bronzy green, deepening into rich bronze on the rump and upper tail-coverts; wings purplish brown; tail green, crossed near the tip by a broad chalybeate band, beyond which the feathers are of a paler green than at the base, and the four outer feathers on each side are fringed with white at the tip; throat luminous green; behind the eye a small tuft of white; ear-coverts dark brown; on each side the breast a tuft of lilac-blue; feathers margined posteriorly with green; under surface glossy green; tuft behind the thigh white; vent feathers grey at the base and tip, olive-green in the middle; bill and feet blackish brown.

The figures are of the size of life.



SCHISTES PERSONATA, *Gould.*

J. Gould and H. C. Richter, del. et lith.

Walter & Cohn, Imp.

SCHISTES PERSONATUS, *Gould.*

Masked Wedge-bill.

Schistes geoffroyi, Sclat. in Proc. of Zool. Soc., part xxviii. p. 70.
——— *personatus,* Gould in Proc. of Zool. Soc., part xxviii. p. 311.

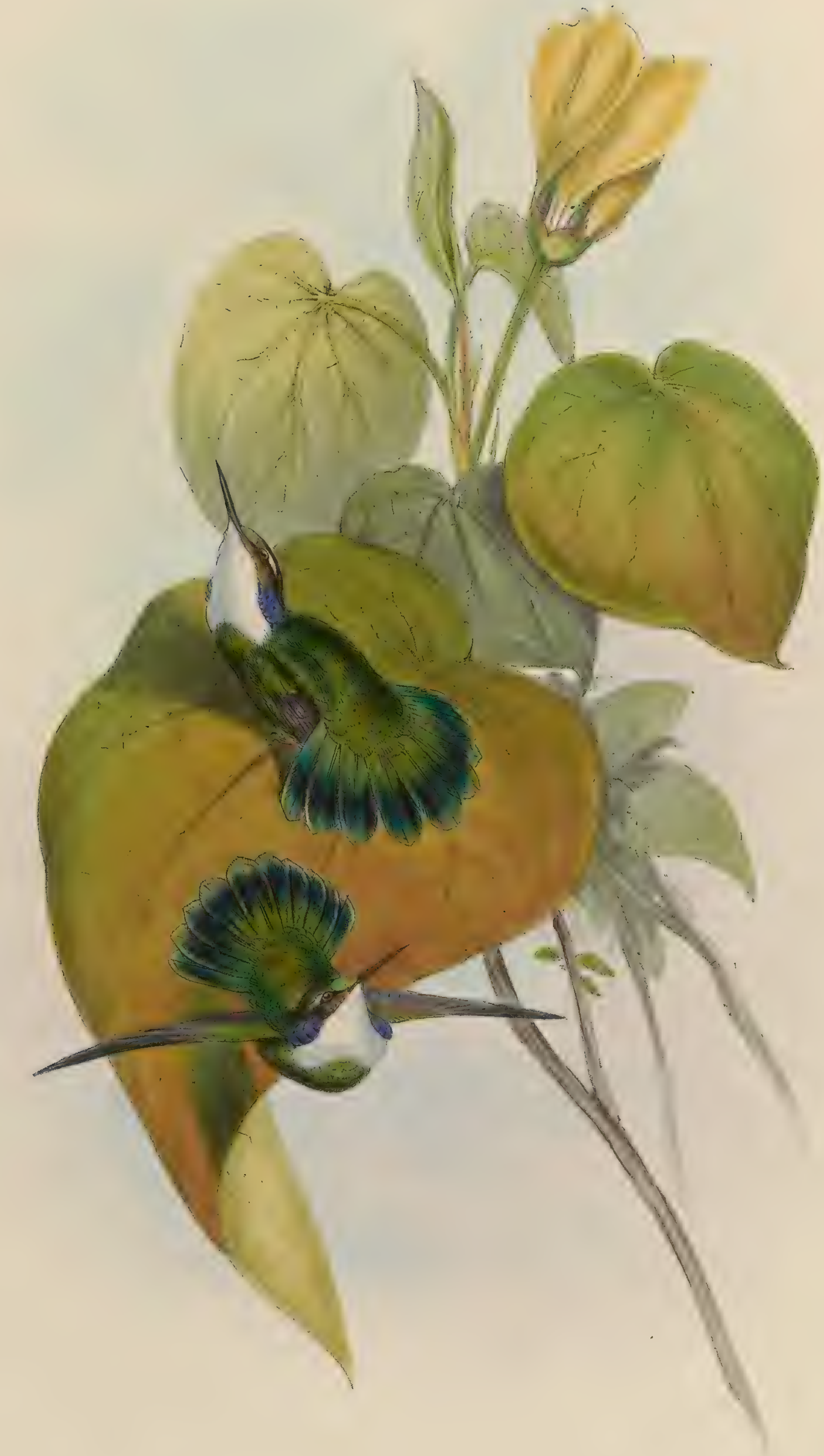
My own collection contains three specimens of this fine bird, all of which are from Ecuador; one of them was shot at Pallatanga by Mr. Fraser.

In point of affinity the *Schistes personatus* is nearly allied to the *S. Geoffroyi*; but as that species is from a different country (New Granada), and never has any glittering colour on the forehead, the two birds cannot be considered as identical. Besides the differences alluded to, the *S. personatus* has a longer bill and is of larger size, which, together with the possession of a glittering forehead, renders it a much finer bird. The only note that I can find respecting this species is the following brief one from the pen of Mr. Fraser in the 'Proceedings of the Zoological Society of London' for 1860.

"I should have taken this to be the male of *S. albogularis* but for the colour of the feet and shape of the tail. Bill and feet black. Stomach contained insects."

Forehead, face, and throat glittering brilliant green, in the form of a mask, posterior to which is a patch of black, below this spring two lengthened tufts of violet-blue feathers, succeeded by a crescentic mark of white; crown of the head, back of the neck, back and shoulders golden-green; tail green, each feather crossed near its apex by a broad band of steel or bluish black; abdomen green; wings purplish brown; bill black.

The figures are of the natural size. The plant is the *Nematanthus ionema.*



SCHISTES ALBOGULARIS, *Gould.*

J. Gould and H. C. Richter, del. et lith. *Hullmandel & Walton, Imp.*

SCHISTES ALBOGULARIS, *Gould.*

White-throated Wedge-Bill.

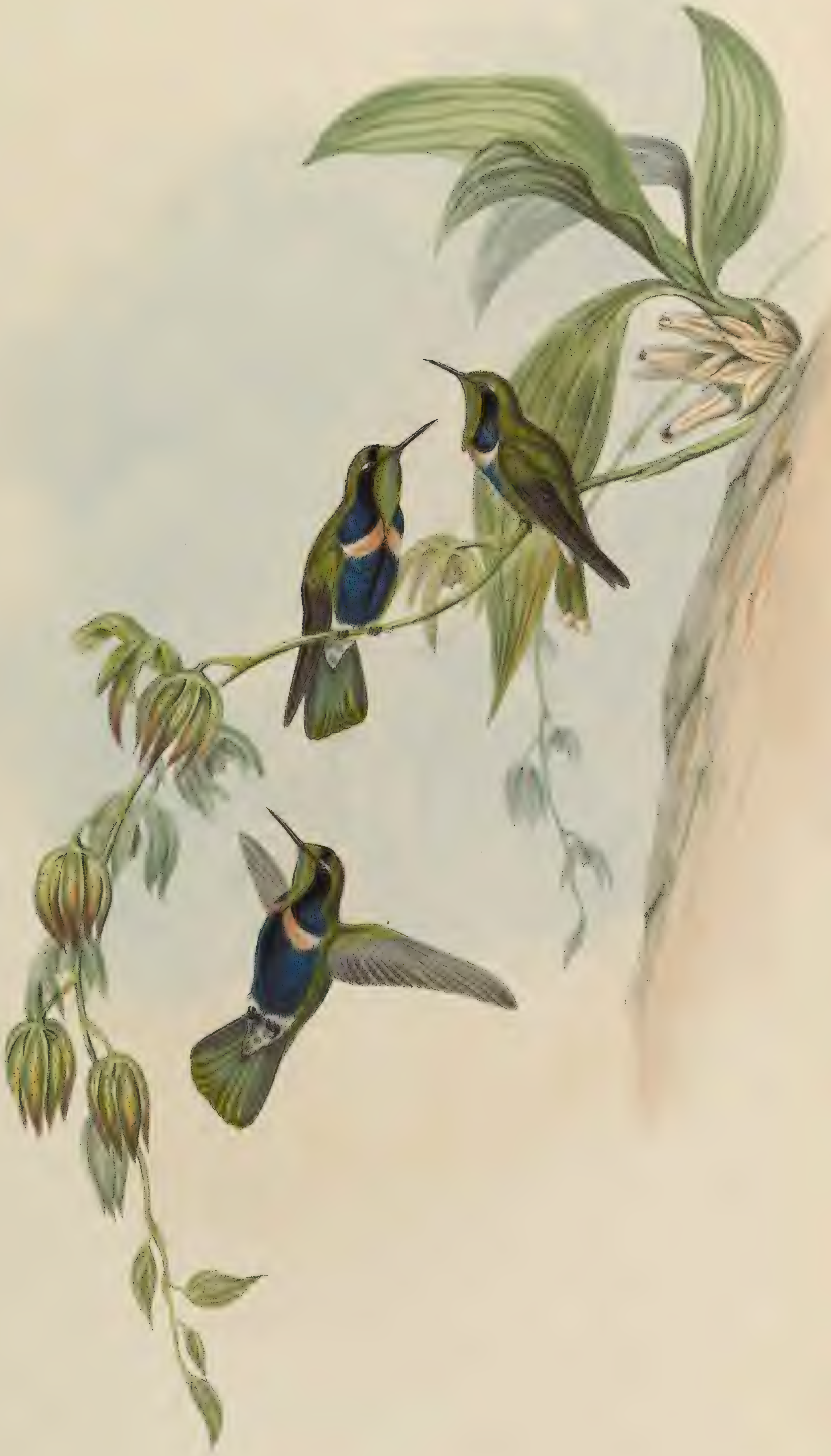
Schistes albogularis, Gould in Jard. Cont. to Orn., 1851, p. 140.

For the two specimens of this bird in my own collection, and which are the only examples I have seen, I am indebted to Professor Jameson of Quito, who collected them on the western side of Pichincha, at an elevation of 6000 feet above the level of the sea. In its form it is precisely similar to the preceding species, the *Schistes Geoffroyi,* at the same time it exhibits several well-marked specific differences: thus it is of a much smaller size; has a longer bill; the entire upper surface of a nearly uniform grass-green, instead of bronzy green; an indication of a distinct bar of metallic green across the forehead; the throat and lower part of the neck pure white, instead of luminous green; and the lilac-blue ear-tufts so small as to be almost obsolete.

The two specimens I have are precisely alike, and in all probability no sexual difference will be found to exist in the colour and marking of the plumage.

Across the forehead an obscure band of luminous green; crown of the head, upper surface and abdomen grass-green; wings purplish brown; tail green, crossed near the tip by a chalybeate band; four lateral feathers narrowly fringed with white at the tip, and the middle tail-feathers washed with bronze; throat, chest, a small patch behind each eye, and a small tuft behind the insertion of the thigh white; ear-coverts brown; a small tuft of lilac-blue feathers on each side the neck; bill and feet brown.

The figures are the size of life.



AUGASTES SCUTATUS.

J. Gould and H. C. Richter del. et lith.

Hullmandel & Walton Imp.

AUGASTES SCUTATUS.

Natterer's Vizor-bearer.

Trochilus superbus, Vieill. Ency. Méth. Orn., part ii. p. 561.
——— *scutatus,* Natterer.—Temm. Pl. Col. 299. fig. 3.—Jard. Nat. Lib. Humming-birds, vol. i. p. 110. pl. 14.
Ornismya Nattererii, Less. Ois. Mouch., p. 75. pl. 16.
Hylocharis superba, Gray and Mitch. Gen. of Birds, *Hylocharis,* sp. 29.

Although Vieillot's appellation of *superbus* is undoubtedly the first that was applied to this species, I have been induced to give the preference to the far more appropriate one of *scutatus,* given to it by M. Natterer. I am aware that in so doing I am departing from the rule of priority, but I conceive that this departure is far preferable to continuing the use of a term which is equally descriptive of many other members of the family, and which would be more applicable to the far lovelier *Augastes Lumachellus* than to the present species.

The *Augastes scutatus* is a native of the interior of Brazil, where the fine specimens contained in the Collection of the Jardin du Roi at Paris were obtained by that justly celebrated botanist M. Auguste de Saint-Hilaire; there also were procured the specimens described by the late Mr. John Natterer of Vienna, and figured by M. Temminck in his "Planches Coloriées" above-quoted.

No information as to its habits and economy has yet been obtained.

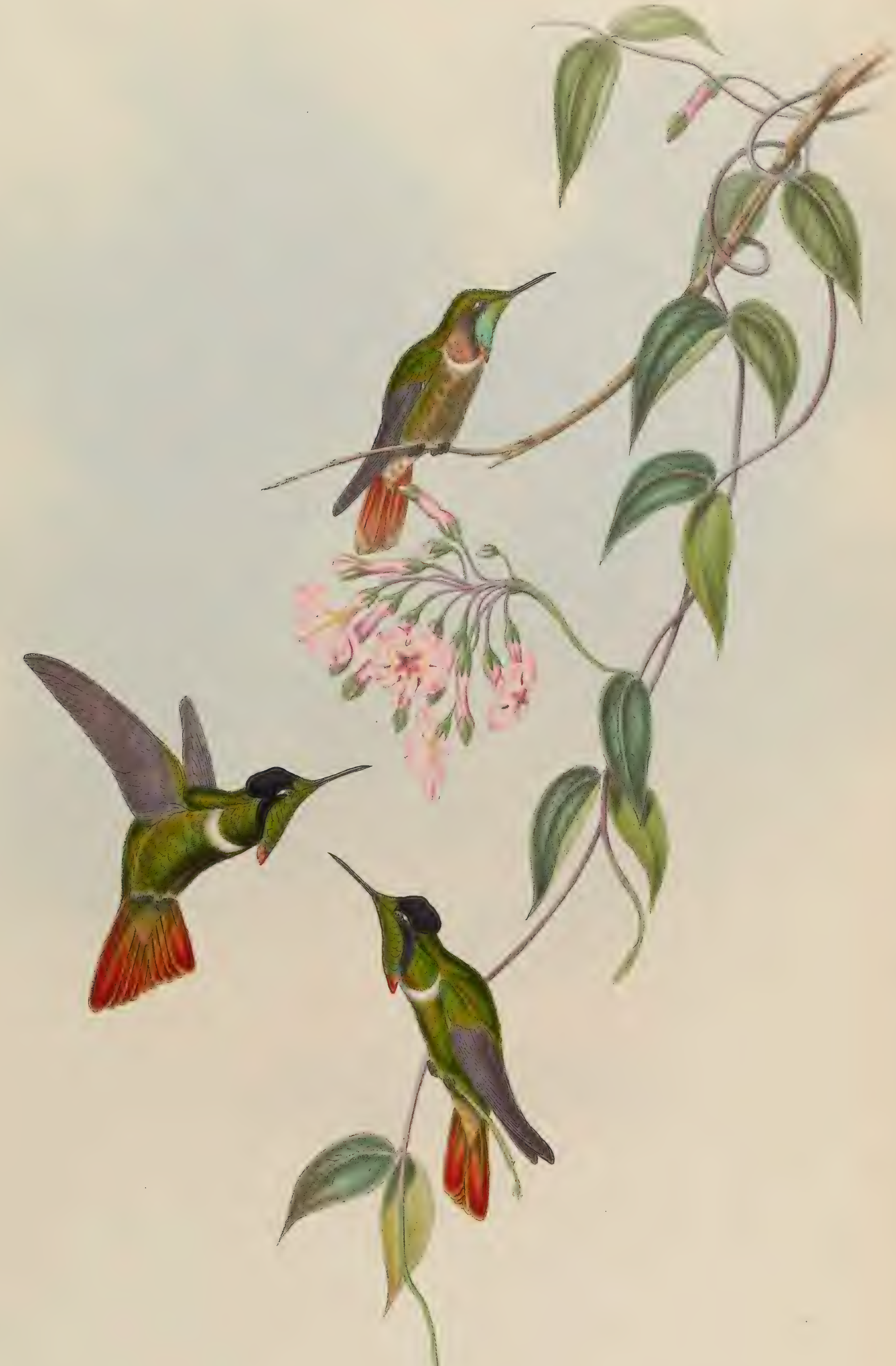
The male has the face and throat clothed with small scale-like feathers of the richest and most luminous emerald green, the feathers lengthened into a pendent point on the chest; band across the crown and ear-coverts deep velvety black; immediately behind the eye a small oblong spot of white; on each side of the neck a lengthened tuft of feathers of a rich indigo blue, separated from the equally rich indigo blue of the abdomen by two crescent-shaped marks of deep buff, one on either side of the chest; all the upper surface, upper and under wing-coverts rich bronzy green; wings purplish brown; vent white; under tail-coverts white spotted with shining green; tail shining metallic green; tarsi clothed with brown feathers; bill black; feet brown.

Total length, 4 inches; bill, $\frac{3}{4}$; wing, $2\frac{1}{4}$; tail, $1\frac{1}{2}$; tarsus, $\frac{3}{16}$.

In general colouring the female is very similar to the male, but the face is much less brilliant; the blue tufts on the sides of the neck are much less developed; the crescent-shaped marks on the chest are white instead of buff; the abdomen is green, with only a tinge of the rich blue; the under tail-coverts are pure white; and the outer tail-feather on each side is tipped with white.

Total length, $3\frac{3}{4}$ inches; bill, $\frac{5}{8}$; wing, $2\frac{1}{8}$; tail, $1\frac{3}{8}$; tarsus, $\frac{3}{14}$.

The Plate represents two males and a female of the natural size. Thebeautiful Orchideous plant is the *Myanthus cernuus.*



J. Gould and H. C. Richter del. et lith.

AUGASTES LUMACHELLUS.

AUGASTES LUMACHELLUS.

Hooded Vizor-bearer.

Ornismya lumachella, Less. Rev. Zool. 1838, p. 315.
Trochilus Lumachellus, Bourc. Rev. Zool. 1846, p. 313.
Hylocharis Lumachellus, Gray and Mitch. Gen. of Birds, *Hylocharis,* sp. 30.

Of all the species of Humming-birds hitherto discovered in Brazil, there is perhaps no one more beautiful in form and colour than the bird here represented; neither is there any one among them of which so little is known both respecting its habits and the localities it frequents. All the specimens in the collections of this country have been obtained in the province of Bahia, and the bird is without doubt an inhabitant of the mountainous parts of the interior to the northward and westward of Minas Geraes. In the disposition of its colouring and markings it precisely resembles the *Augastes scutatus,* but is distinguishable from that species by its larger size, by the pendant locket-like mark of crimson at the extremity of the beard, and by the luminous metallic red colouring of the tail.

As in *A. scutatus,* considerable difference exists in the plumage of the sexes, which may be thus described:—

The male has the face and throat rich lustrous golden green, bounded below by a narrow line of bluish green, and terminating in a few pointed feathers of a rich shining iridescent crimson-red; head deep velvety black, which colouring extends over the sides of the neck, and is continued in a narrow line behind the luminous colouring of the throat; plumage of the body, both above and beneath, shining bronzy green; on either side of the chest a crescent-shaped mark of white; wings purplish brown; tail golden bronzy red, except the apical three-fourths of the two central feathers which are pure bronze, and the outer margins of the two next feathers on each side which are washed with green; under surface of the tail rich deep luminous bronzy crimson; across the vent an irregular line of white; bill black.

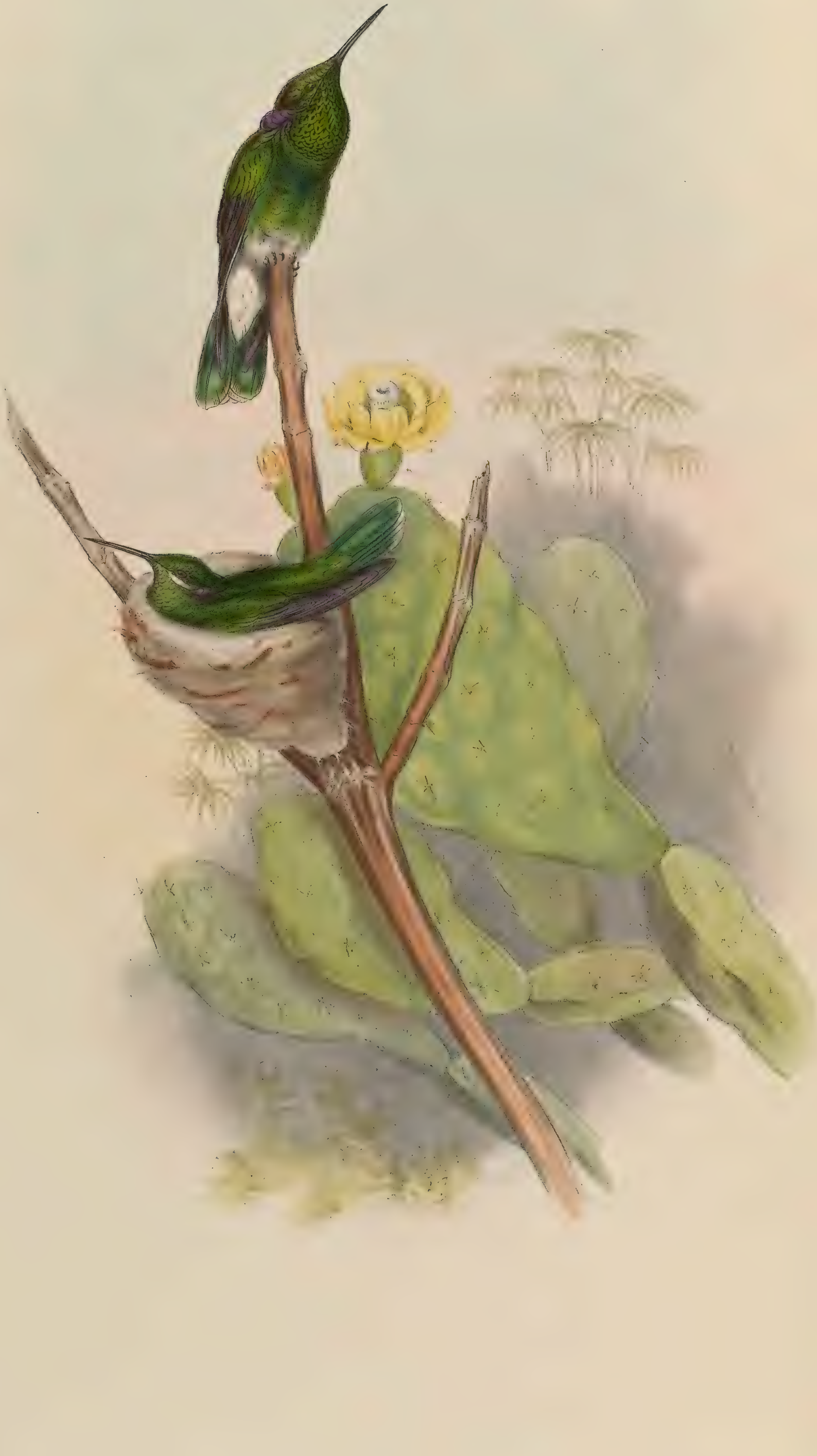
Total length, $4\frac{1}{4}$ inches; bill, $\frac{7}{8}$; wing, $2\frac{3}{8}$; tail, $1\frac{1}{2}$; tarsus, $\frac{1}{4}$.

The female has the upper and under surface of a more bronzy hue; the head green instead of velvety black; the ear-coverts dull blackish brown; the green of the throat less lustrous, not extending to the forehead; the greenish blue feathers at its base more apparent, and the locket-like mark less conspicuous; the upper surface of the tail of a uniform bronzy copper hue, and the under surface similar to, but less brilliant than, that of the male.

Total length, $4\frac{1}{8}$ inches; bill, $\frac{3}{4}$; wing, $2\frac{1}{4}$; tail, $1\frac{3}{8}$; tarsus, $\frac{1}{4}$.

The young birds of the year have the upper surface bronzy green; the throat white, each feather tipped with shining green; only a trace of the locket-like mark so conspicuous in the adult; the under surface brown, glossed with bronze; the upper surface of the tail bronzy copper, except the two middle tail-feathers, which assume a crimson hue, and are narrowly edged with purple; and the under surface of the tail similar in colour, but less brilliant than in the adult.

The Plate represents two males and a female of the natural size.



PETASOPHORA SERRIROSTRIS.

J. Gould and H. C. Richter del et lith.

Hullmandel & Walton Imp.

PETASOPHORA SERRIROSTRIS.

Brazilian Violet-Ear.

Trochilus serrirostris, Vieill. Nouv. Dict. d'Hist. Nat., 2nd edit. tom. vii. p. 359.—Ib. Ency. Méth. Orn., Part ii. p. 561.—Ib. Ois. dor., tom. iii. pl. i. ined.

——— *janthinotus,* Natt.

——— *petasophorus,* Prins Max. von Wied, Reise nach Bras., tom. ii. p. 191.—Ib. Beitr. iv. p. 76.—Temm. Pl. Col. 203. fig. 3.—Jard. Nat. Lib. Humming Birds, vol. i. p. 120. pl. 13, male; vol. ii. p. 81. pl. 15, female.

Ornismya petasophora, Less. Hist. Nat. des Ois. Mou., p. 37. pl. 1.—Ib. Traité d'Orn., p. 284.—Ib. Man. d'Orn., tom. ii. p. 78.

Grypus? Vieilloti, Steph. Cont. of Shaw's Gen. Zool., vol. xiv. p. 256.

Colibri crispus, Spix, Av. Sp. Nov. Bras., tom. i. p. 80. t. lxxxi. fig. 1.

Petasophora serrirostris, Gray, List of Gen. of Birds, 2nd edit. p. 17.—Gould in Proc. of Zool. Soc., Part xv. p. 8.—Bonap. Consp. Gen. Av., p. 69, *Petasophora,* sp. 1.

Polytmus serrirostris, Gray and Mitch. Gen. of Birds, vol. i. p. 108, *Polytmus,* sp. 24.

Petasophora Gouldi, Bonap. Consp. Gen. Av., p. 69, *Petasophora,* sp. 2?

The *Petasophora serrirostris* is, I believe, the sole representative of the form in Brazil, to which country it appears to be strictly confined, but where it seems to be very general from the Amazon to Rio de Janeiro; in the southern districts, however, it is only a summer visitant, Mr. Reeves informing me that it arrives in Rio de Janeiro, Minas Geraes, San Paulo and Bahia in July, and departs again in September; during its short sojourn it is very common, and evinces a special fondness for the orange flowers. Its cry, which is frequently uttered while feeding, is very loud, and resembles the syllables *strep-strep.*

The nest, which is rarely met with, is placed in various situations, but very commonly among Cacti; one sent to me by Mr. Reeves is placed in the fork of a small branch, and is composed of some cottony material intermingled with a substance like thistle-down, laced together with cobwebs, vegetable fibres, the husks of seeds, &c.; it is of a round, cup-shaped form, and contains the usual two white eggs, about half an inch long by nearly three-eighths of an inch in breadth.

I have remarked that many of the specimens from Bahia are smaller than those from Rio, and very frequently small individuals arrive less brilliantly coloured, and with a considerable amount of white on their outer tail-feathers. I believe some of the French Trochilidists have considered these smaller birds to be a distinct species; I am not, however, disposed to assent to this opinion until I have had opportunities of more closely investigating the subject; indeed I have some doubts of its propriety, from the circumstance of a similar difference of size being observable in several other species; my own opinion has hitherto been that these small specimens are females of the first year, and this I still think likely.

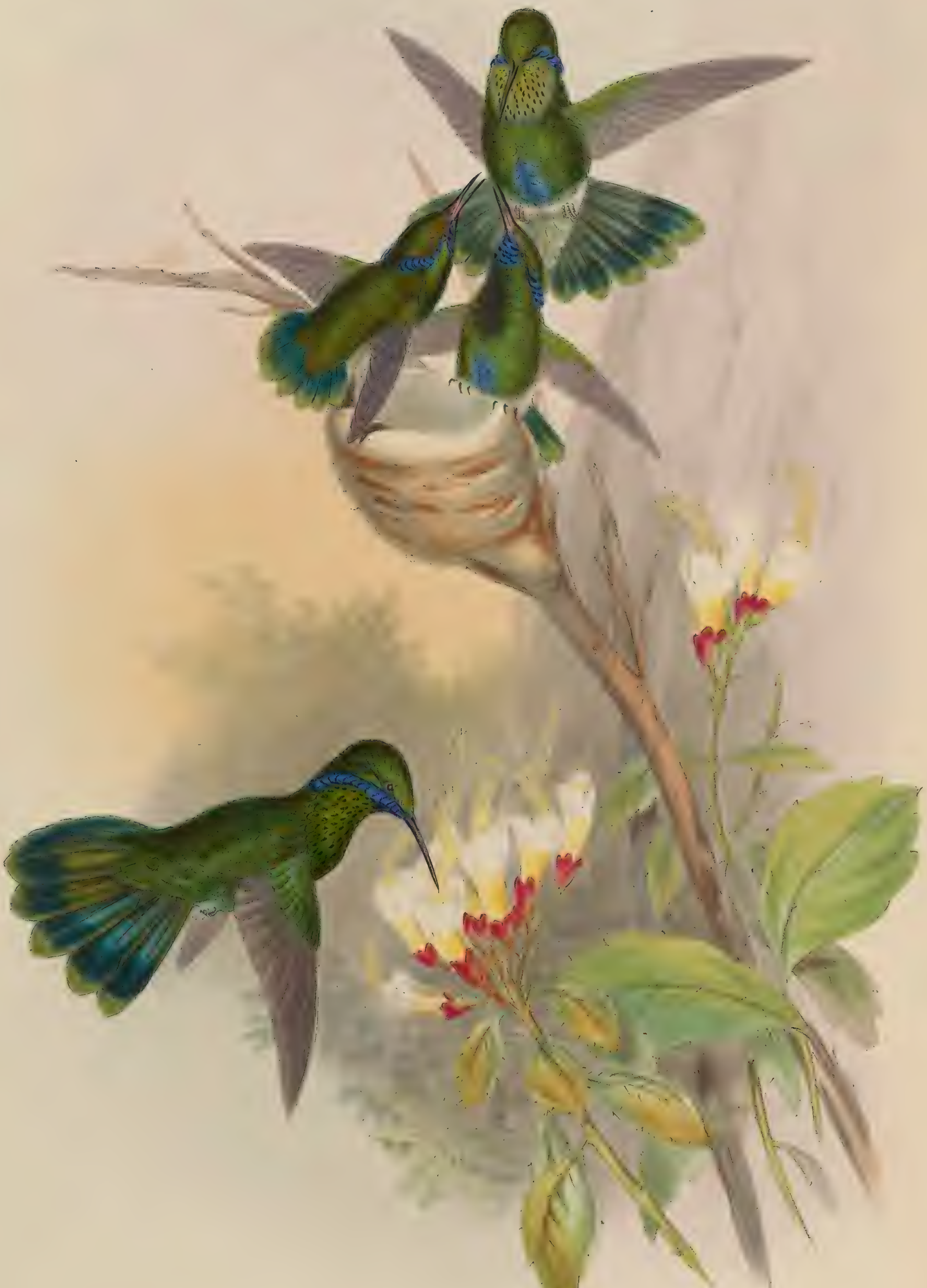
Mr. Reeves states that fully adult females are externally undistinguishable from the males, a fact he had ascertained by removing eggs from the ovaria of specimens which he had considered to be males.

The snow-white under tail-coverts is a feature by which the *P. serrirostris* may be distinguished from the whole of its congeners.

Head, upper surface, wing-coverts, flanks and abdomen dark yellowish green; ear-coverts rich violet-blue; wings purplish brown; tail dark bluish green, crossed near the tip by a broad chalybeate band, beyond which the tips are of a lighter bluish green; throat and upper part of the breast luminous green, presenting a tessellated appearance, occasioned by the reflexions from the webs throwing a darker hue on the centre of each feather, and producing a sparkling effect; across the breast a gorget of shining bluish green; vent and under tail-coverts pure white; bill black; feet blackish brown.

In the immature birds the colouring is similar, but much less brilliant, and the markings not well defined, besides which a greyish white tint pervades the under surface. In the smaller birds, which I have considered to be young females, the upper surface is more green, the mark on the throat smaller and less brilliant, the tail more blue, the chalybeate band on which is less apparent, and all the feathers, especially the outer one on each side, slightly tipped with white, and the lower part of the abdomen, as well as the vent and under tail-coverts, are white.

The figures are of the natural size; the Cactus is a Brazilian species, with the proper name of which I am unacquainted.



PETASOPHORA ANAIS.

J. Gould and H. C. Richter del et lith.

Hullmandel & Walton, Imp.

PETASOPHORA ANAIS.

Columbian Violet-Ear.

Ramphodon Anais, Less. Hist. Nat. des Troch., p. 146. pl. 55.
Petasophora Anais, Gould in Proc. of Zool. Soc., Part xv. p. 8.
Polytmus Anais, Gray and Mitch. Gen. of Birds, vol. i. p. 108, *Polytmus*, sp. 27.
Colibri Anais, Bonap. Consp. Gen. Av., p. 69, *Colibri*, sp. 3.
Trochilus thalassinus, Jard. Nat. Lib. Humming Birds, vol. ii. p. 47.
Trochilus Anais, Jard. ib. p. 1.

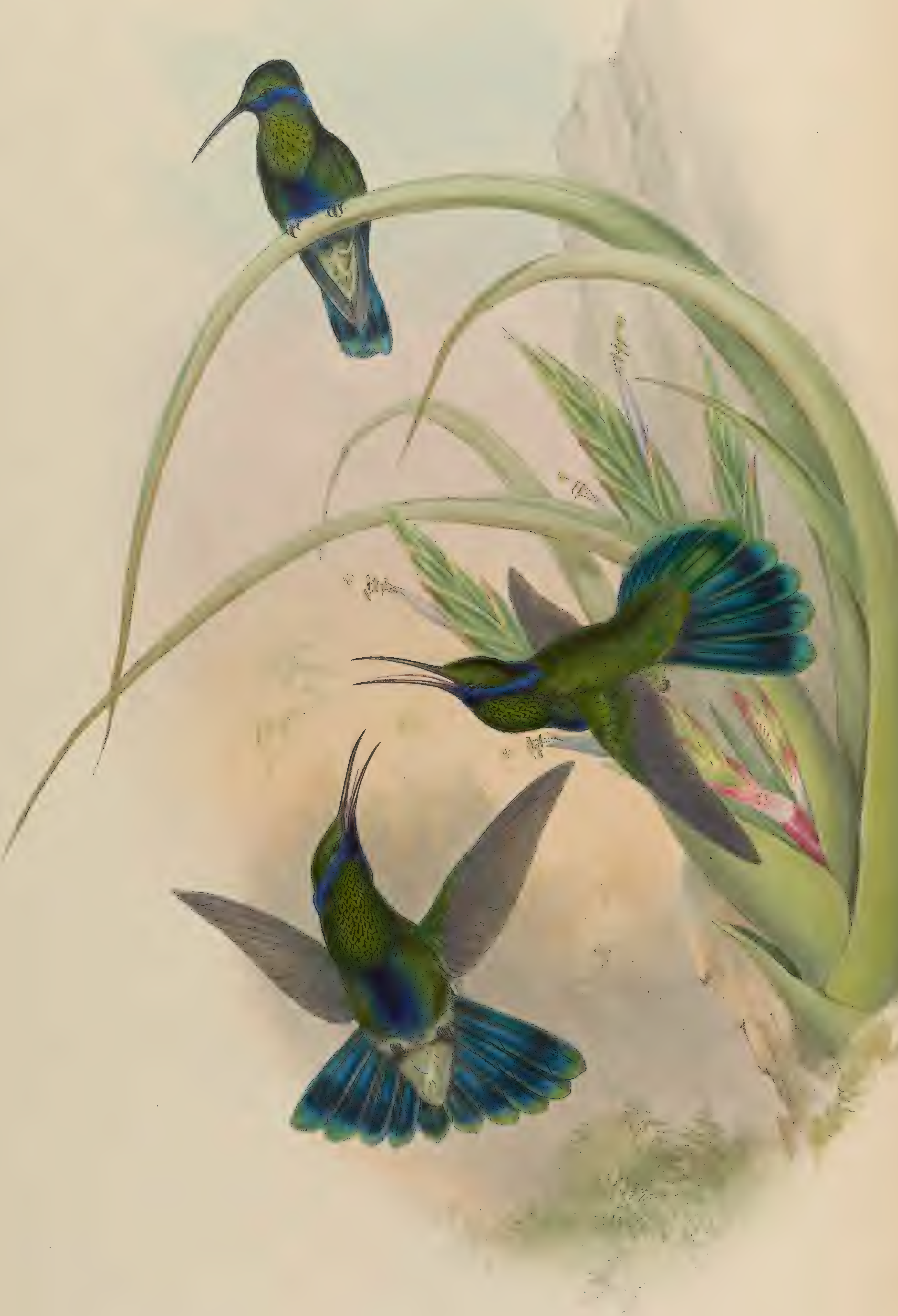
Great confusion exists with respect to the synonymy of the birds to which the term *Anais* has been applied, and which is chiefly, if not solely, attributable to the carelessness of M. Lesson, who, not perceiving their specific differences, has published at least three species of this genus under that name,—has described another bird of a totally different form in the "Revue Zoologique" for 1838 and 1839 under the same appellation,—and has moreover added considerably to the confusion by giving incorrect habitats to the birds his figures are intended to represent; this confusion I have endeavoured to unravel, by assigning the various synonyms to the birds to which they appear respectively to belong; and by retaining the term *Anais* as the specific distinctive for the one so commonly sent as such in collections from Santa Fé de Bogota, and which will be more readily recognized by a reference to the accompanying Plate than by the most accurate description.

This species, which appears to be strictly confined to the mountainous districts of Columbia, is especially abundant in the neighbourhood of Bogota, whence its range extends northwards to the Caraccas and southwards to the confines of Peru; it neither descends to the hot plains below nor upwards to the bleak mountain sierras, but dwells in the luxuriant and temperate regions lying between these extremes, and where it is so numerous that it is more commonly met with than any other species. I have never seen an example from the Mexican side of the Isthmus of Panama, consequently the habitat of Mexico assigned to it by M. Lesson would seem to be incorrect. Little or nothing has been recorded of its habits, and we only know that it is very pugnacious and drives every other species from its feeding-ground. It will be seen that the nestling birds, which are drawn from specimens in my collection, assume much of the fine colouring of the adults before they have left the nest; the blue colouring of the ear-coverts, the chin and the abdomen, and the verditer hue of the tail, being nearly as rich as in the adults. In this early stage of their existence, however, there is no trace of the rich chequered metallic green plumage of the breast; that part being clothed with a velvety blackish green hue, which is not exchanged for the gayer colouring until the bird has attained a size nearly equal to that of the adult, probably not until the spring moult of the following year. Much difference exists in the size of the sexes, the females being nearly a third less than the males, but in colour they are precisely alike.

Head, all the upper surface, including the wing-coverts and the flanks, rich shining green; wings purplish brown; tail deep bluish green, crossed near the tip with a broad chalybeate band; the two central feathers washed with bronze, and the tips of all shining green; chin, line under the eye, ear-coverts and centre of the abdomen rich shining purplish blue; fore part of the neck and breast luminous green, with a streak of a darker hue down the centre of each feather, giving the whole a sparkling chequered appearance; under tail-coverts grey, washed on the centre with green; bill black; feet blackish brown.

In immature birds the upper surface is bronzy green, and the luminous green of the throat is at first entirely wanting, but is afterwards gradually assumed as the bird approaches to maturity; in other respects the plumage is similar to that of the adult.

The figures represent a male, a female, two young birds and a nest, all of the natural size. The beautiful plant is the *Cantua pyrifolia*.



PETASOPHORA IOLATA, *Gould*

J Gould and H C Richter del et lith

Hullmandel & Walton Imp

PETASOPHORA IOLATA.

Bolivian Violet-Ear.

Petasophora iolata, Gould in Proc. of Zool. Soc., Part xv. p. 9.
Polytmus iolatus, Gray and Mitch. Gen. of Birds, vol. i. p. 108, *Polytmus,* sp. 28.
Colibri jolata, Bonap. Consp. Gen. Av., p. 69, *Colibri,* sp. 4.

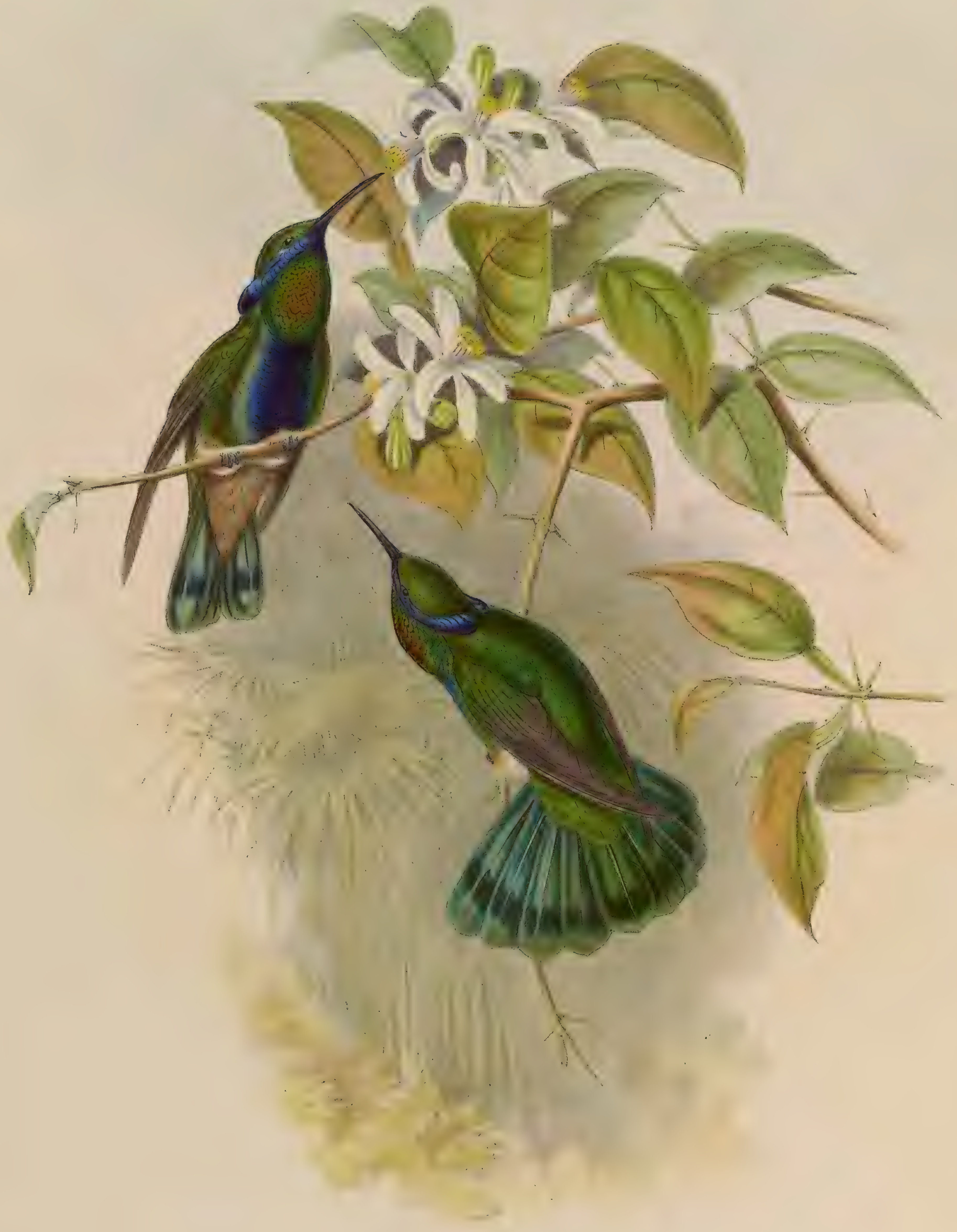
Although the colouring of this species is precisely similar to that of *P. Anais,* I have always regarded it as distinct, and in confirmation of this view, I may state that it is of much larger size, that it has a longer and more curved form of bill, and that it moreover inhabits a different country. It is true that the two species inosculate in Peru, but the true habitat and breeding place of the present bird is Bolivia, whence it extends southward to the confines of Chili and eastward to Chuquesaca, from which latter district I have received numerous examples both of the bird and its nest. Mr. Bonelli informs me that it arrives there in September and October, and is then very common in the valleys among the fields of maize; after breeding and rearing its young, it migrates to the more congenial country of Peru, and there remains during the months of winter.

In the southern countries above mentioned the *P. Iolata* forms a beautiful representative of the *P. Anais,* of the comparatively northern provinces of Columbia and the Caraccas. Should it be considered that I have drawn too nice a distinction in describing this bird as distinct, it must be admitted, that it is a very well marked race, and well worthy of being figured.

The sexes exhibit the same difference of size, and the same similarity of colouring, that is observable in *P. Anais*; like that species, too, it is said to be of a most pugnacious disposition.

Head, all the upper surface, wing-coverts and flanks rich shining green, glossed in some specimens with gold; wings purplish brown; tail deep bluish green, crossed near the tip with a broad chalybeate band, the two central feathers tinged with golden, and the tips of all shining green; chin, line under the eye, ear-coverts and centre of the abdomen, rich shining purplish blue; throat and breast luminous green, presenting a tessellated appearance, occasioned by the reflection from the webs throwing a darker hue on the centre of each feather; under tail-coverts grey, washed on the centre with green; bill black; feet blackish brown.

The Plate represents two males and a female of the natural size. The plant is the *Vriesia glaucophylla.*



PETASOPHORA CORUSCANS, *Gould*

J. Gould and H. C. Richter del. et lith. *Hullmandel & Walton Imp.*

PETASOPHORA CORUSCANS, *Gould.*

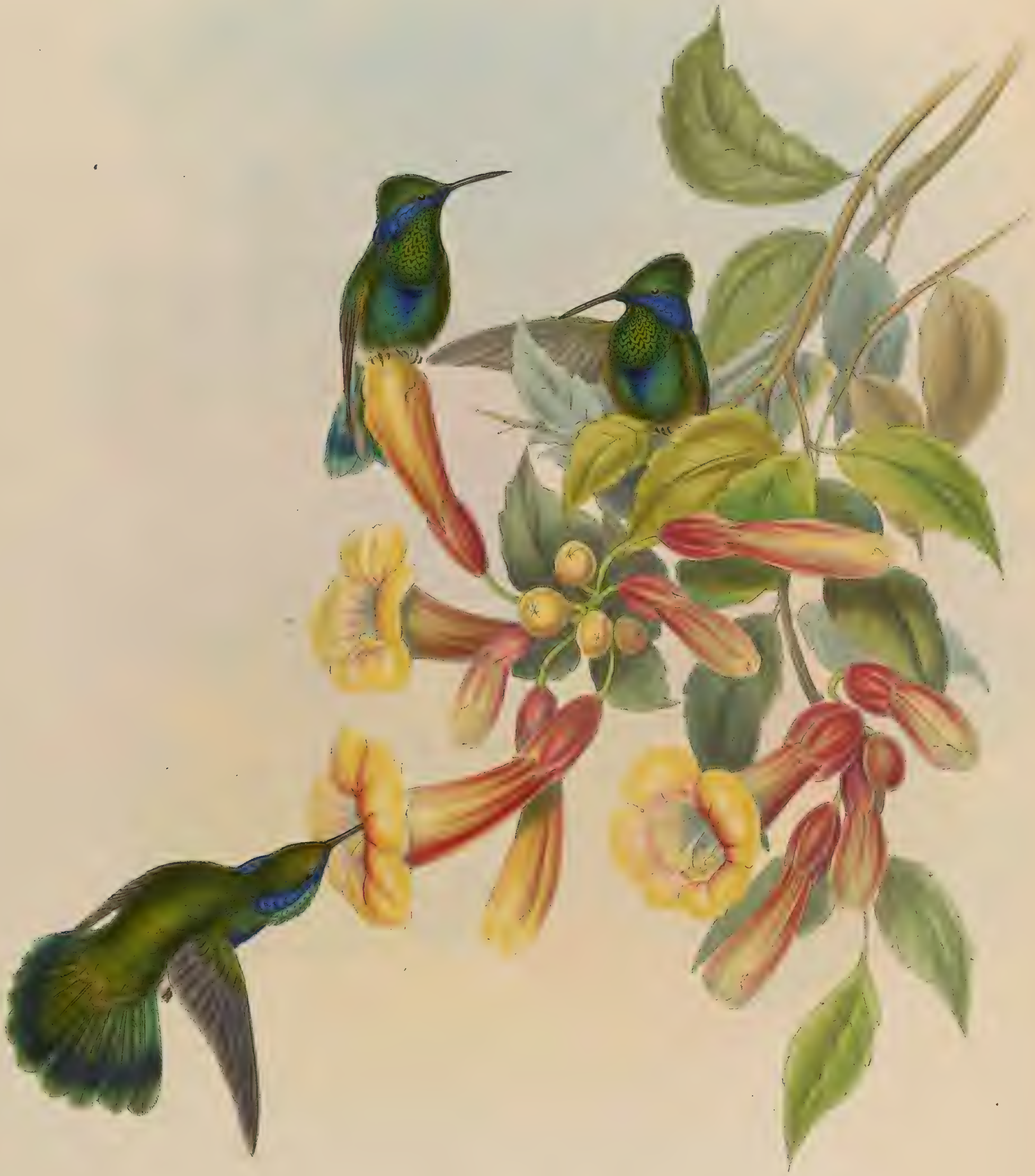
Chequered Violet-Ear.

Trochilus (*Petasophora*) *coruscans,* Gould in Proc. of Zool. Soc., Part xiv. pp. 44, 90.
Petasophora coruscans, Gould in Proc. of Zool. Soc., Part xv. p. 9.
Polytmus coruscans, Gray and Mitch. Gen. of Birds, vol. i. p. 108, *Polytmus,* sp. 29.
Colibri coruscans, Bonap. Consp. Gen. Av., p. 69, *Colibri,* sp. 5.

Of this beautiful bird a single example only is contained in my collection; I obtained it of Mr. Leadbeater, who, I regret to say, could give me no information whatever respecting it. In the rich golden brown colouring of the tessellated feathers, and in the deep buff colour of the under tail-coverts, it offers an alliance to *P. Delphinæ*; but it has much more blue on the breast than any other known species, and this colour moreover extends much higher, confining the tessellated feathers to the throat, as seen in *P. serrirostris.* It must rank as one of the finest members of this well-defined genus.

Crown of the head, all the upper surface and flanks green; band commencing on the centre of the chin and extending under the eye and the ear-coverts purplish blue; wings purplish brown; tail greenish blue, crossed near the tip with a broad chalybeate band, and with the central feathers much dilated; tessellated feathers of the throat shining green, with bronze and dull green reflexions; breast and centre of the abdomen blue; under tail-coverts dull green, broadly tipped with buff; bill black; feet brown.

The figures represent this fine bird of the natural size, in two positions.



PETASOPHORA THALASSINA.

J Gould and H C Richter, del et lith

Hullmandel & Walton, Imp.

PETASOPHORA THALASSINA.

Mexican Violet-Ear.

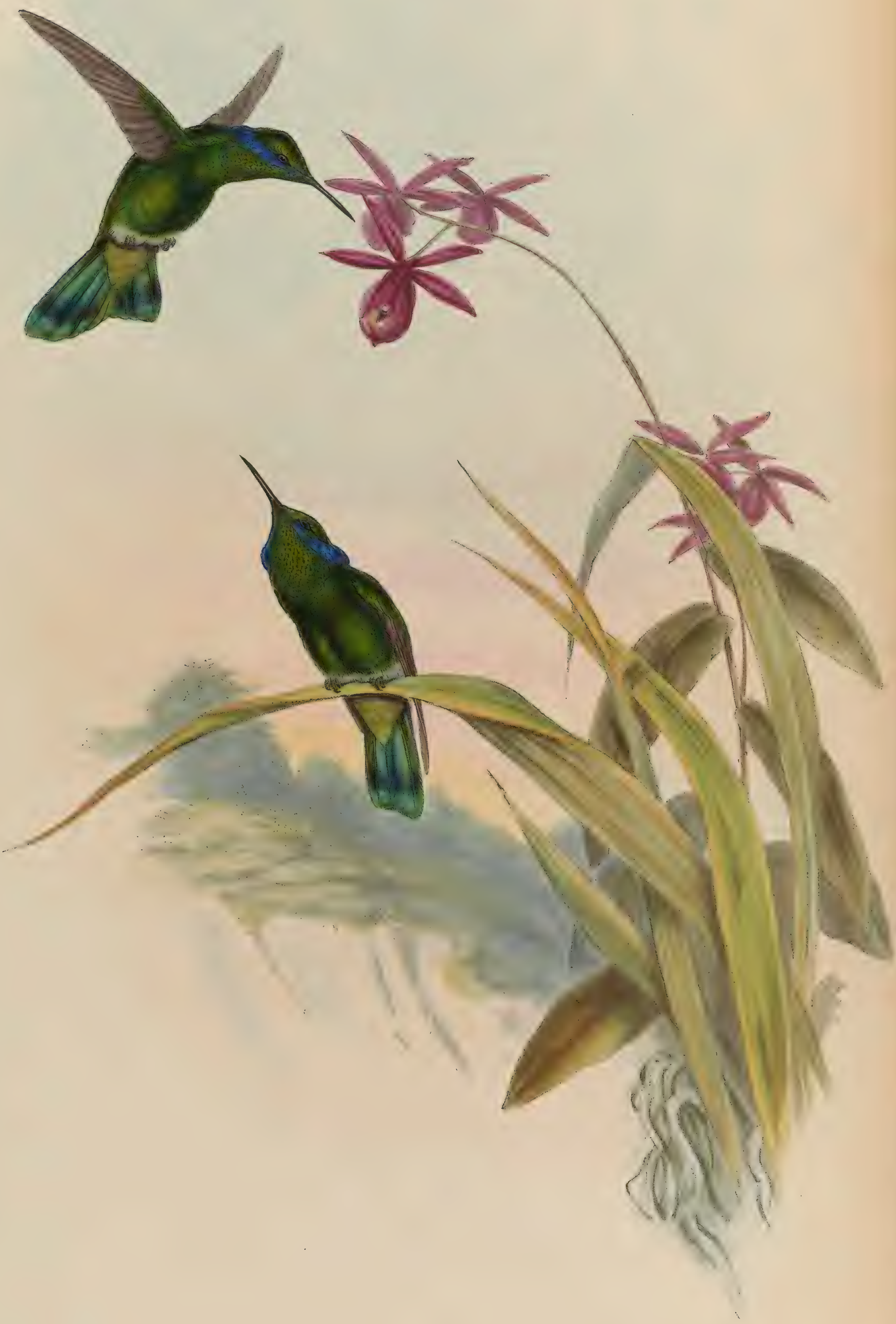
Trochilus thalassinus, Swains. Syn. Birds of Mexico in Phil. Mag., June 1827, p. 441.
Ornismya Anais, Less. Hist. Nat. des Col., p. 104.—Ib. Supp. des Ois. Mou., pl. 3?
Ramphodon Anais, Less. Hist. Nat. des Troch., p. 148. pl. 56?
Polytmus thalassinus, Gray and Mitch. Gen. of Birds, vol. i. p. 108, *Polytmus*, sp. 26.
Petasophora thalassinus, Gould in Proc. of Zool. Soc., Part xv. p. 8.
Colibri thalassinus, Bonap. Consp. Gen. Av., p. 69, *Colibri*, sp. 2.
Trochilus Anais, Jard. Nat. Lib. Humming Birds, vol. ii. p. 2?

Mexico may claim this species as strictly its own; for although it is found in the States of Guatemala, Costa Rica and Veragua, Mexico proper would seem to be its chief habitat, and it is certainly not found to the southward of the Isthmus of Panama. It presents a singular combination of characters in its colouring, uniting *P. cyanotus* with *P. Anais*, but it is quite distinct from both; the blue mark on the breast at all times distinguishing it from the former, and the almost total absence of the blue mark on the chin, and its smaller size, from the latter. It will be seen that I have thought it likely that two of the birds figured by Lesson, under the name of *Anais*, are identical with the present species, and indeed I can refer them to no other; at the same time his figures are by no means correct representations.

To Mr. Swainson pertains the credit of characterizing this bird as distinct from all the other species of the family then known, he having assigned to a specimen procured at Temiscaltipec the appellation of *thalassinus* in his "Synopsis of the Birds of Mexico," published in the "Philosophical Magazine" as long since as June 1827.

Head, all the upper surface, wing-coverts and flanks yellowish green; a narrow line commencing on the centre of the chin and extending under the eye and the ear-coverts purplish blue; throat and chest tesselated luminous green, as in the other species; centre of the abdomen deep blue; tail deep green, crossed near the tip by a broad chalybeate band; two central feathers slightly washed with bronze; wings purplish brown; bill dull black; feet blackish brown.

The figures are of the natural size, on one of the beautiful Bignonias of the country it inhabits.



PETASOPHORA CYANOTIS.

J Gould and H C Richter, del et lith.

Hullmandel & Walton Imp.

PETASOPHORA CYANOTIS.

Little Violet-Ear.

Trochilus cyanotus, Bourc. Rev. Zool. 1843, p. 101.—Ib. Ann. Sci. et Phys. de Lyons, tom. vi. p. 41.

Petasophora cyanotus, Gould in Proc. of Zool. Soc., Part xv. p. 8.

Polytmus cyanotus, Gray and Mitch. Gen. of Birds, vol. i. p. 108, *Polytmus,* sp. 25.

Colibri cyanotus, Bonap. Consp. Gen. Av., p. 69, *Colibri,* sp. 1.

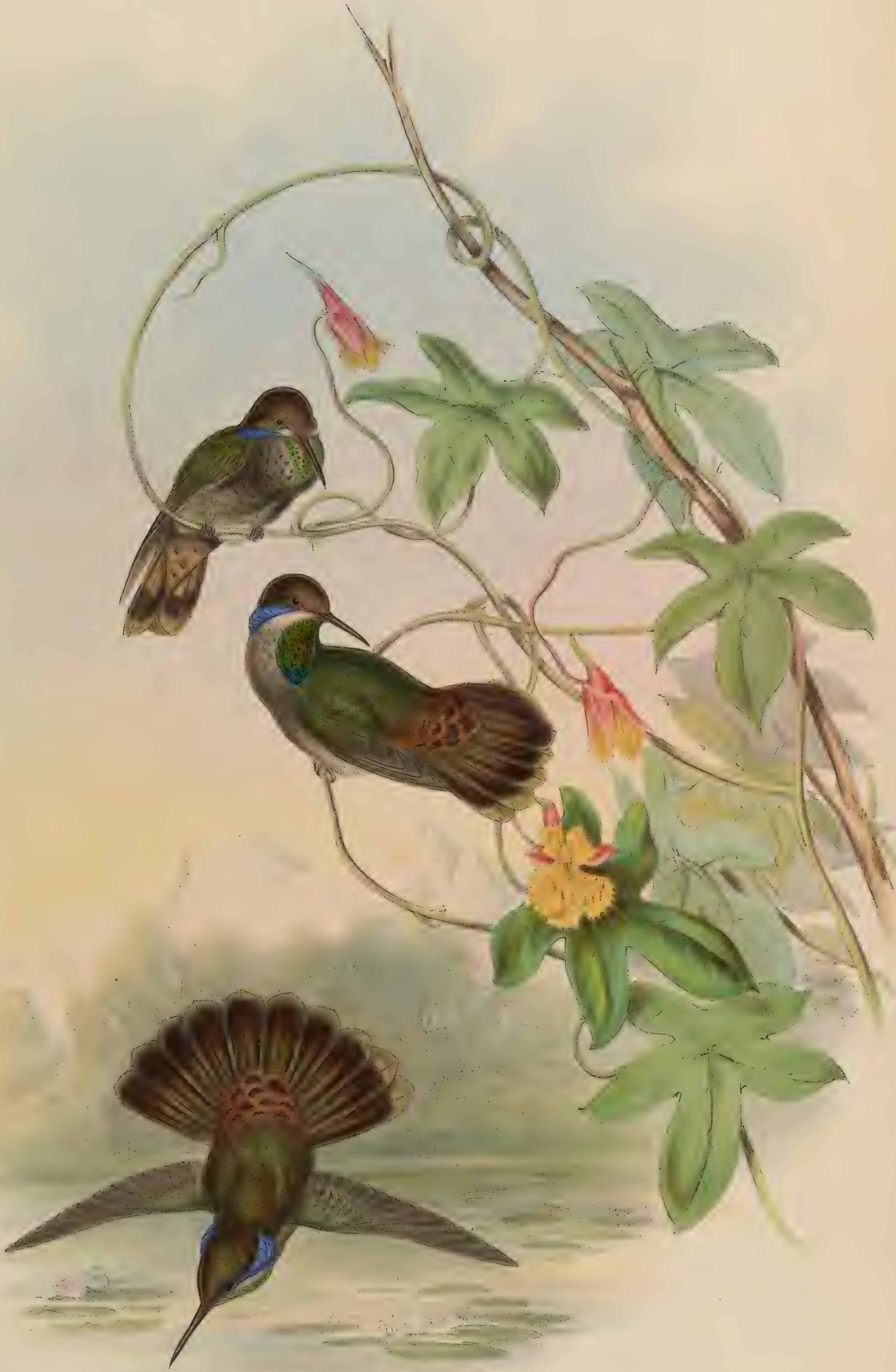
Ornismya Anais, Less. Hist. Nat. des Troch., p. 151. pl. 57 ?

Compared with *P. Anais* and *P. Iolata* this is a small species, and it may, moreover, be distinguished from these, as well as all the other upland members of the genus, by the total absence of blue colouring on the chin and abdomen; I believe the bird figured by Lesson on the 57th plate of his "Hist. Nat. des Trochilidées" to be identical with the one here represented, and not, as he states it to be, the female of *P. Anais.*

The *P. cyanotis* enjoys a wide range over the Andes, extending from Ecuador throughout Columbia northward to Veragua and Costa Rica, from all of which countries I possess examples. Mr. Dyson collected numerous specimens in the Caraccas, and M. Warszewicz has sent others in all the collections made by him in Peru. In all these countries it inhabits the temperate and warmer regions, wherever flowers and insect life abound. The usual diversity of size occurs in this as in the other members of the genus, the female being very much smaller than the male. A rich golden tint prevails in some specimens, while others are dark glossy green. Some individuals, particularly those brought by M. De Lattre, are so much smaller than those from Bogota and other districts, as to induce the opinion that they may be distinct; but this is a point which can only be determined when we have had opportunities for more accurate investigation of the subject than are at present afforded us.

In most specimens the head, upper surface and wing-coverts, abdomen and flanks are dark bronzy green, while others have the same parts of a nearly uniform dark shining grass-green; line under the eye and ear-coverts rich purplish blue; wings purplish brown; tail dark shining green, crossed near the tip by a broad chalybeate band and the two central feathers washed with bronze; chin, throat and breast luminous tessellated green, as in the other species, but not quite so brilliant in some examples as in others; the hue too varies, being pure green in some and of a golden green in others; under tail-coverts buff, washed with green in the centre; bill black; feet blackish brown.

The Plate represents a male and a female of the natural size; the plant is the *Barkeria Lindleyana.*



PETASOPHORA DELPHINÆ.

J. Gould and H. C. Richter del et lith

Hullmandel & Walton Imp

PETASOPHORA DELPHINÆ.

Brown Violet-Ear.

Ornismya Delphinæ, Less. Rev. Zool. 1839, p. 44.—Ib. Echo du Monde savante, 1843, no. 31.—Ib. Ill. de Zool., tom. ii. pl. 64.

Petasophora Delphinæ, Gould in Proc. of Zool. Soc., Part xv. p. 8.

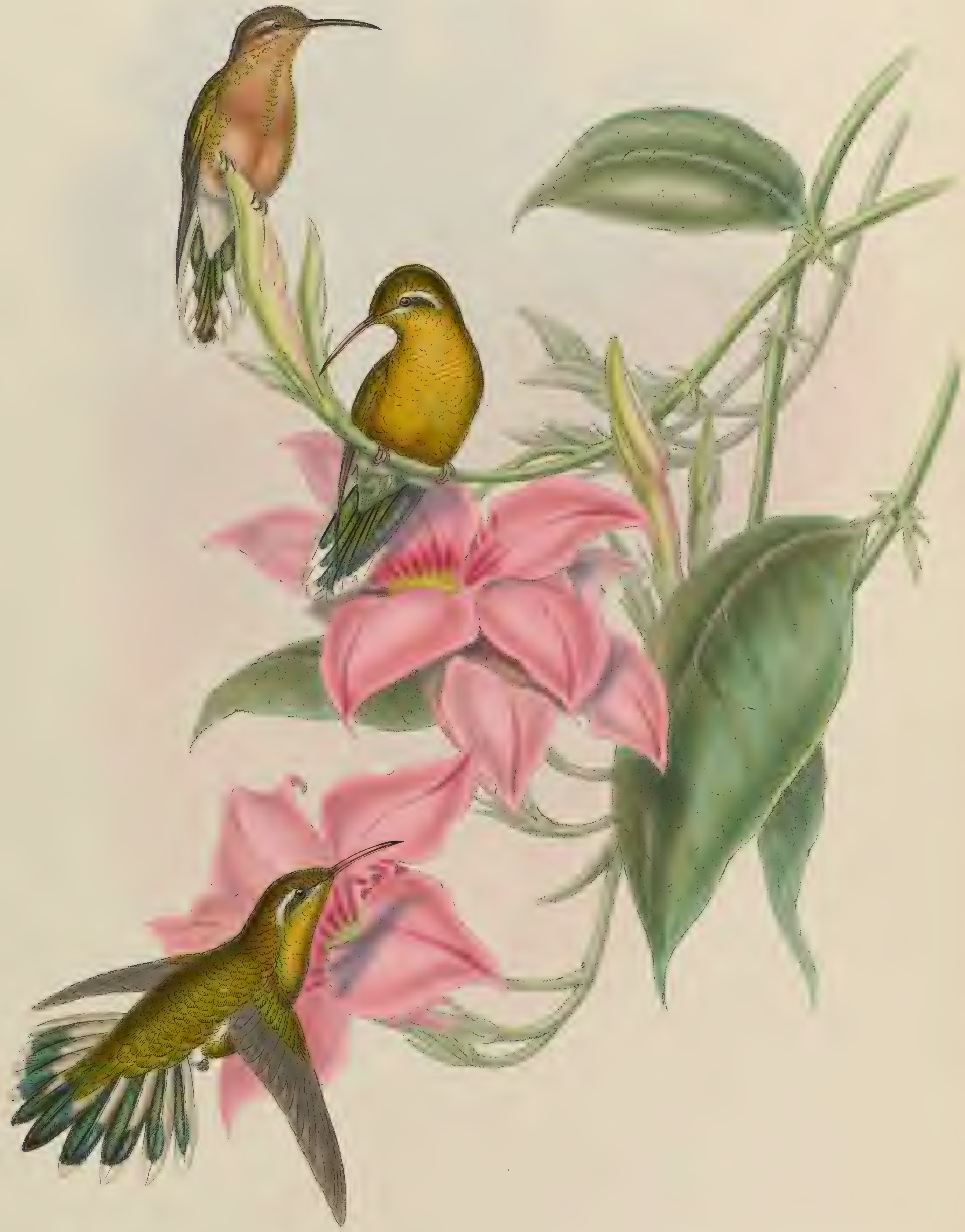
Polytmus Delphinæ, Gray and Mitch. Gen. of Birds, vol. i. p. 108, *Polytmus,* sp. 30.

Colibri delphinæ, Bonap. Consp. Gen. Av., p. 69, *Colibri,* sp. 6.

No member of the genus *Petasophora,* nor indeed of the whole family of Trochilidæ, enjoys a more extensive range than this well-marked species; for it inhabits alike Trinidad, the low countries of Cayenne and Demerara, the Caraccas, and the temperate regions of Columbia; M. Warszewicz has also sent it to me from the Andes of Quindios and from Peru, and it is occasionally found in collections from Santa Fé de Bogota. Its sombre colouring, and the rufous brown hue of the lower part of the back and the upper tail-coverts, at once distinguish it from every other member of the genus; and the only difference I have observed between the upland and lowland specimens is that the former are of a somewhat smaller size; in colour and markings they are alike.

Head, upper and under surface dark olive-brown; the feathers of the rump and upper tail-coverts largely tipped with dull rufous; wings purplish brown; tail pale bronzy brown, crossed near the tip by a broad band of dark brown; ear-coverts rich purplish blue; down each side of the face a stripe of greyish buff; on the centre of the throat a small patch of tessellated feathers, the lower portion of which is blue and the upper bronzy green; vent and under tail-coverts pale rufous, with darker centres; bill and feet blackish brown.

The figures are of the size of life.



CHRYSOBRONCHUS VIRESCENS.

J Gould and H C Richter del et lith

Hullmandel & Walton, Imp

CHRYSOBRONCHUS VIRESCENS.

Golden-throated Humming-bird.

Trochilus Thaumantias, Linn. Syst. Nat., tom. i. p. 489.—Lath. Ind. Orn., vol. i. p. 309.—Vieill. Nouv. Dict. d'Hist. Nat., tom. vii. p. 253.

——— *viridescens*, Linn. Syst. Nat., Ed. 6., gen. 76. sp. 2.

Le Petit Colibri, Briss. Orn., tom. ii. p. 667. 2nd part.—Buff. Pl. Enl. 600. fig. 1.—Ib. Hist. Nat. des Ois., tom. vi. p. 64. sp. 19.

L'Oiseau-mouche à queue verte et blanche, Aud. et Vieill. Ois. Dor., tom. i. p. 83. pl. 41.

Admirable Humming-bird, Lath. Gen. Syn., vol. ii. p. 763. no. 25.—Ib. Gen. Hist., vol. iv. p. 318. sp. 39.—Shaw, Gen. Zool., vol. viii. p. 285.

Bright-throated Humming-bird, Lath. Gen. Hist., vol. iv. p. 309. no. 28.—Shaw, Gen. Zool., vol. viii. p. 287.

Trochilus virescens, Dumont, Dict. Sci. Nat., 1818.—Licht. Cat.—Vieill. Nouv. Dict. d'Hist. Nat., tom. xxiii. p. 428.—Prince Max, Beit. zur Naturg. von Bras., p. 107.

——— *chrysobronchus*, Shaw, Gen. Zool., vol. viii. p. 287.—Ib. Steph. Cont., vol. xiv. p. 240.

——— *viridis*, Vieill. Nouv. Dict. d'Hist. Nat., tom. vii. p. 354.

Ornismya viridis, Less. Hist. Nat. des Ois.-mou., p. 178. pl. 60.—Ib. Les Troch., p. 144. pl. 54.

Trochilus chloroleucurus, Saucerotte.

Polytmus chrysobronchus, Gray and Mitch. Gen. of Birds, vol. i. p. 108, *Polytmus*, sp. 52.

Chrysobronchus virescens, Bonap. Rev. et Mag. de Zool. 1854, p. 252.

Leucippus chrysobronchus, Reichenb. Aufz. der Colibris, p. 11.

The adult plumage of the bird figured on the accompanying Plate is so resplendently beautiful that it defies all the powers of art to give its faithful portraiture; I must therefore content myself with as close a representation of it as possible. Its native country is Brazil, over which it ranges from Rio de Janeiro to the Amazon, and thence probably throughout the whole of the seaboard to the Isthmus of Panama, as I have specimens collected on the Magdalena by M. Warszewicz. It is also found in Trinidad. The individuals from the latter locality are, however, somewhat smaller in size and have more white on their tail-feathers than those found in Brazil, and I have often thought these differences might be of sufficient importance to constitute a distinct species.

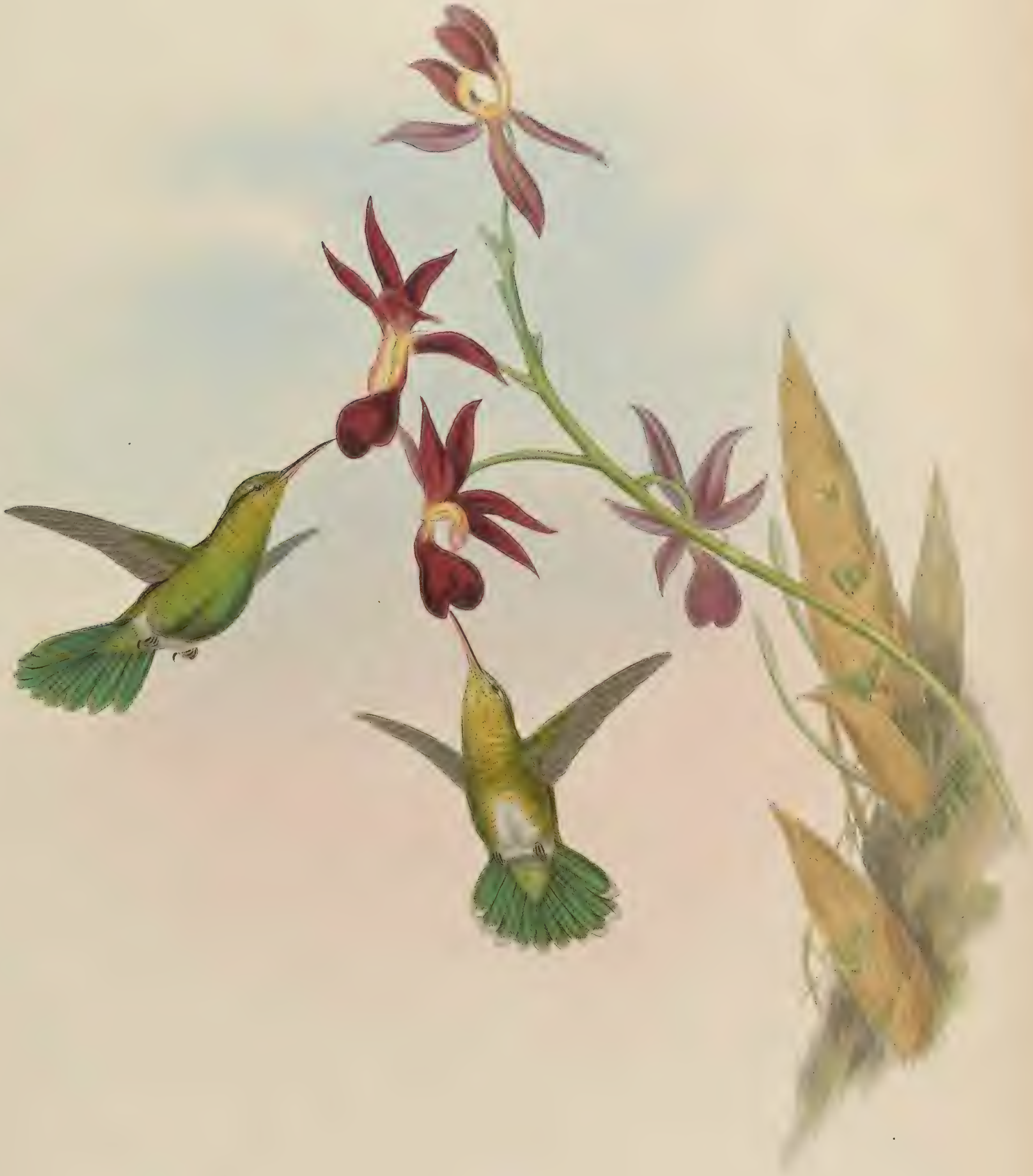
The synonymy of the *Chrysobronchus virescens*, like that of some other members of the family, is in a sad state of confusion; on this point I have consulted with the celebrated French Trochilidist, M. Bourcier of Paris, and the above list is given on his authority.

The specimens sent to this country usually arriving unlabelled, we have no means of determining if there be any marked difference in the colouring of the sexes; so far as may be judged from an examination of a large number of specimens, they are similar; on the other hand, the young have a very different style of colouring, as may be seen on reference to the accompanying Plate, where a specimen is figured in a state of change from youth to maturity. I have a young specimen in my collection, which, it is pretty certain, was sent from Bogota; but if this be the case, the bird must be regarded as rare in that district.

All the upper surface, wing- and tail-coverts golden green; throat, chest and abdomen light luminous golden green; wings purplish brown; tail shining green; the lateral feathers with a stripe of greyish white along the basal portion of the outer web and tipped with greyish white; under tail-coverts green; vent white.

In the young the under surface is deep fawn colour, with a line of golden-green feathers down the centre of the throat, and the white portion of the tail is very conspicuous.

The Plate represents adults and young of the natural size. The plant is the *Dipladenia acuminata*.



[illegible]

J. Gould and H.C. Richter del et lith

Hullmandel & Walton Imp

CHRYSOBRONCHUS VIRIDICAUDUS.

Green-tailed Humming-bird.

Trochilus viridissimus, Aud. et Vieill. Ois. Dor., tom. i. p. 84. pl. 42.
Le Petit Colibri, Vieill. Ency. Méth. Orn., part ii. p. 557. pl. 129. fig. 1.
Ornismya viridis, Less. Les Troch., p. 96. pl. 33.
Trochilus Theresiæ, Da Silva, Maia Minerva Brasiliensis, 1843, p. 2.

As is the case with the foregoing species, *Chrysobronchus virescens,* much confusion has hitherto existed with regard to the correct specific name of this species, and it is the unravelling of the synonymy of such species as these which is the great plague of the Monographist. Accompanying the list of synonyms which M. Bourcier sent me as in his opinion applicable to *C. virescens* were the synonyms given above as having reference to this species, and the following note respecting it:—

"Il existe au muséum de Paris le type du *viridissimus* de Vieillot, qui ne laisse aucun doute à cet égard.

"À l'époque où M. Lesson publiait son volume des Trochilidées je lui envoyai divers sujets, afin qu'il puisse déterminer les deux espèces, confondues par les anciens auteurs, mais il n'y porta pas toute l'attention voulue, et il se contenta d'en faire une figure en lui conservant le nom de *viridis.*

"Vous feriez bien d'admettre *viridicaudus,* Gould. J'avais conseillé au Prince Charles Lucien Bonaparte dans son 'Conspectus' d'adopter *viridissimus*; mais ce nom ayant aussi été donné par Lesson a une autre espèce, il vaut mieux ne pas s'en servir."

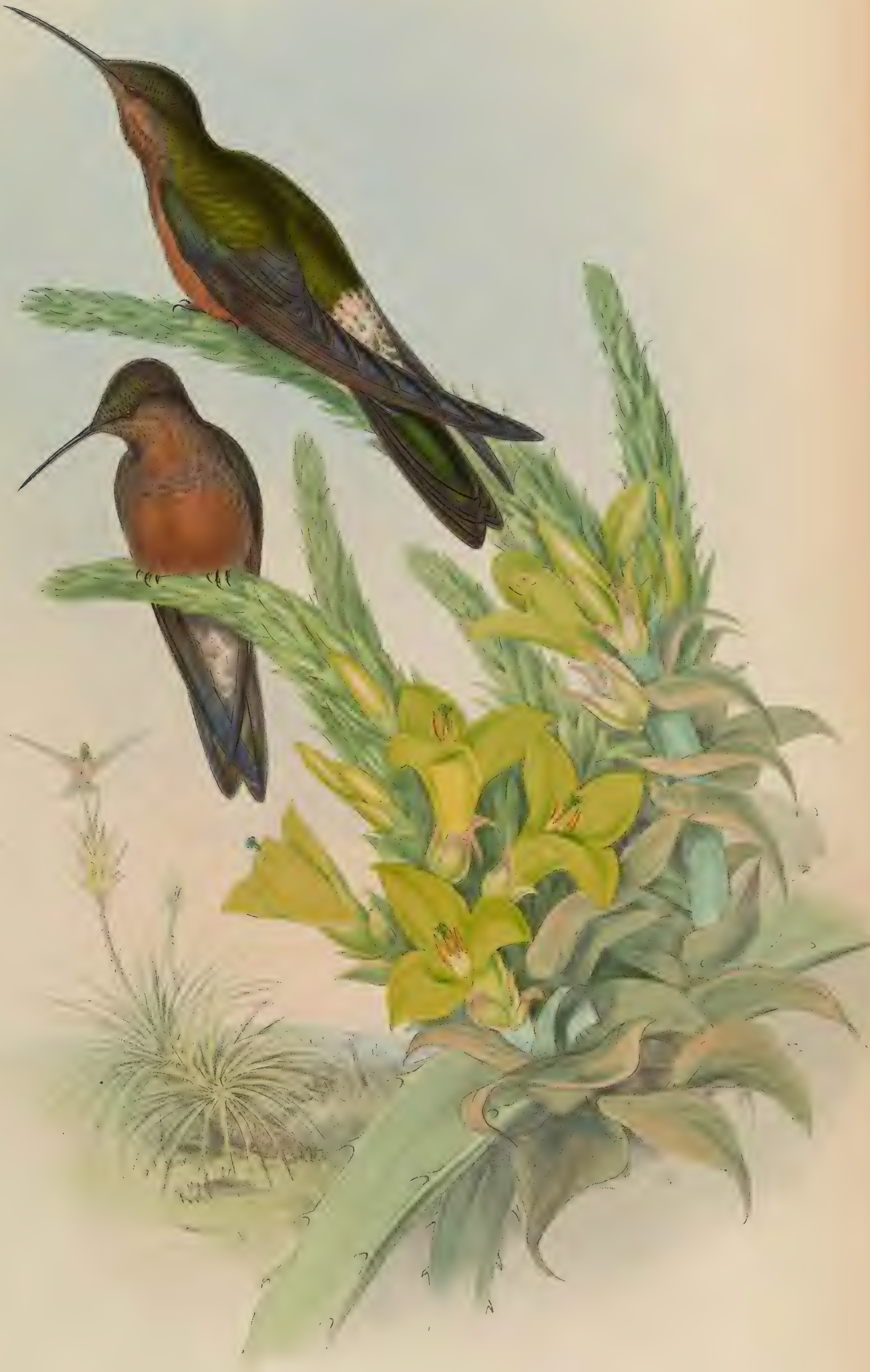
Whatever uncertainty there may be respecting the names applied to this bird, there is none with regard to the countries it inhabits, for we are constantly receiving specimens direct from all parts of the delta of the Amazon, from Para upwards to the tributary streams of Peru and New Grenada. It is also especially abundant in Guiana, Cayenne and Demerara, whence great numbers are sent to Paris in company with the other families of birds inhabiting those countries.

The sexes differ in the smaller size of the female, and in that sex as well as the young of the year having the tail-feathers tipped with white and the under surface of a greyer or more uniform tint.

The male has the head, upper surface, wing- and tail-coverts bronzy green; under surface shining grass-green; wings purplish brown; tail-feathers shining greenish bronze above and green beneath; vent and under tail-coverts white; upper mandible black; basal two-thirds of the under mandible fleshy red, the tip black.

The female is similarly clothed on the upper surface, but on the under is grey washed with green; and her lateral tail-feathers are slightly tipped with white.

The figures are of the natural size. The plant is the *Mormodes atropurpurea.*



PATAGONA GIGAS.

J Gould and H C Richter, del et lith.   Hullmandel & Walton, Imp

PATAGONA GIGAS.

Giant Humming Bird.

Trochilus gigas, Vieill. Gal. des Ois., tom. i. p. 296. pl. 180.—Ib. Ois. dor., tom. iii. inedit. pl. 25.—Jard. Nat. Lib. Humming Birds, vol. ii. p. 50. pl. 3.

Ornysmya tristis, Less. Hist. Nat. des Ois. mou., pp. xi. & 43. pl. 3.—Ib. Ind. Gen. et Syn. des Ois. du Genre *Trochilus*, p. iv.

Cynanthus tristis, Ib. Traité d'Orn., p. 272.

Ornismya giganteus, D'Orb. et LaFres.

Patagona gigas, G. R. Gray, List of Gen. of Birds, 2nd edit., p. 18.—Bonap. Consp. Gen. Av., p. 75.—Ib. Rev. et Mag. de Zool. 1854, p. 251.—Reichenb. Aufz. der Colibris, p. 14.

Hylocharis gigas, Gray and Mitch. Gen. of Birds, vol. i. p. 114, *Hylocharis*, sp. 1.

The figures on the accompanying Plate give a faithful representation, the size of life, of this the largest of the Humming Birds, which has been truly designated as the giant of its family, for by no other species is it approached in size. It is said to be a bold and vigorous flier, to be quick in all its actions, and to pass from flower to flower with the greatest rapidity, notwithstanding the length and volume of its wings, which would seem to be far better adapted for lengthened and continuous progress than for poising in the air, which the bird is in constant habit of doing while visiting, with little choice of species, the numerous flowers of the forest, and among others the Cacti. It is stated, that, unlike the other species of the family, it may be frequently seen perched on some small tree or shrub. It enjoys an extensive range of habitat over the southernmost portions of South America, being found in most parts of Bolivia, Southern Peru and Chili.

M. Lesson states, that it inhabits the forests in the interior of Chili, and that it advances into the country of the Araucanos, the wild Pampas of the Puelches, to the south of Old Chili, and to the foot of the Andes. M. Warszewicz collected specimens in Bolivia, at an elevation of from 12,000 to 14,000 feet. Mr. Bonelli informs me, that "it annually visits in abundance the villa grounds of General Santa Cruz near La Paz, and that it goes as far to the eastward as Chuquesaca; procures its insect food from maize, barley, and various leguminous plants; flies about all the shrubs with such rapid motions and quick turns that it is extremely difficult to procure examples; and dwells in all the temperate and colder regions of La Paz." Mr. Cuming tells me that in Chili it is strictly migratory, arriving from the north in August; and, after spending three months in that country, during which it breeds, returns to whence it came.

Of this form I consider but one species has yet been discovered, for, although some slight difference in colouring has occurred in the many specimens which have come under my notice, I regard them all as identical; the principal difference being in the colouring of the abdomen, which in some is sandy red, in others olive and brown.

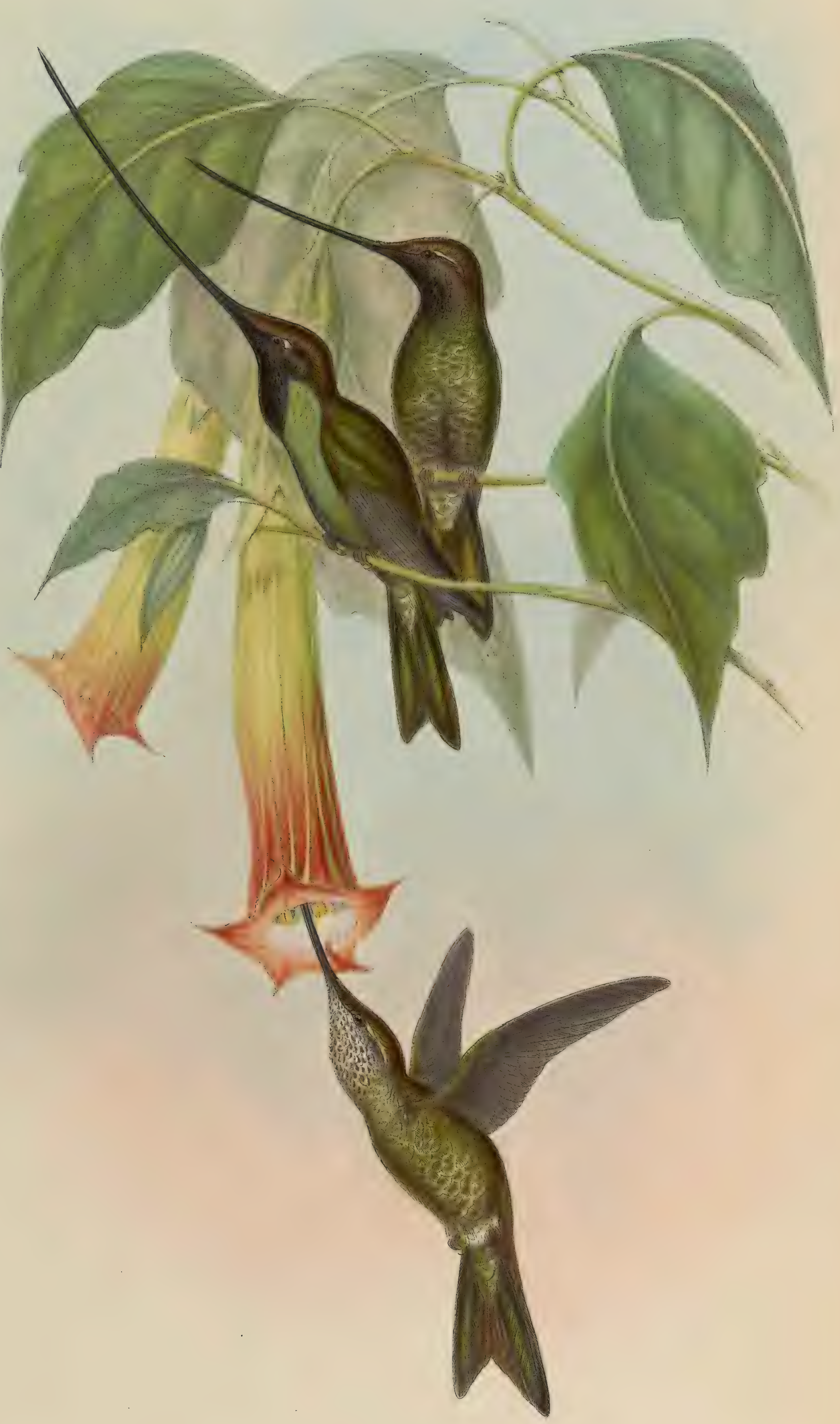
There appears to be little difference in the colouring of the sexes; less, in fact, than in size, for the female is very much smaller than her mate.

The nest is a somewhat large cup-shaped structure, composed of mosses, lichens and similar materials put together with cobwebs, and placed in the fork of a branch of some tree or shrub, generally on one overhanging a turbulent stream of water. The eggs are white, two in number, of the usual lengthened form, and about three-quarters of an inch from end to end.

The *Patagona gigas* has now become very common, and examples may be seen in nearly every Collection.

Head and all the upper surface pale brown, glossed with green; wings and tail similar but somewhat darker, and the green gloss more conspicuous, especially on the tail-feathers; basal portion of the shafts of the lateral feathers white; an irregular patch of white on the rump; upper tail-coverts narrowly fringed with white; breast mottled brown and buff; throat and abdomen rusty red; under tail-coverts white, with a wash of brown in the centre of each; bill blackish brown; feet brown.

The figures are the size of life. The plant is the *Puya Chilensis*.



DOCIMASTES ENSIFERUS.

J. Gould and H. C. Richter del. et lith.

Hullmandel & Walton Imp.

DOCIMASTES ENSIFERUS.

Sword-bill.

Ornismya ensifera, Boiss. Rev. Zool. 1839, p. 354.—Mag. de Zool. 1840, Ois. pl. 15.—Lodd. in Proc. of Zool. Soc., Part XI. 1843, p. 122.

Trochilus Derbianus, Fras. in Proc. of Zool. Soc., Part VIII. 1840, p. 16.

Mellisuga ensifera, Gray and Mitch. Gen. of Birds, *Mellisuga,* sp. 1.

This is another of the new and very remarkable species that have rewarded the researches of modern naturalists in the magnificent region of Santa Fé de Bogota, where most of the specimens sent to Europe have been procured; it appears, however, to possess a wide range, for I have heard of its being observed in the Caraccas, and my friend Sir William Jardine, Bart., has lately received from Mr. Jameson an example obtained in the shrubby region on Pichincha in Quito, at an elevation of from 11,000 to 12,000 feet above the sea.

Mr. Hartweg, the celebrated botanical traveller, informs me that he has seen this bird in a state of nature, and that he frequently saw it engaged in procuring its insect food from the lengthened corollas of the *Brugmansiæ*, for exploring which its lengthened bill is so admirably fitted; affording another instance of the wonderful adaptation of structure to a given purpose so frequently observable in every department of Nature's works.

The male has all the upper surface and the wing-coverts bronzy green, assuming a coppery hue on the head; behind the eye a spot of white; throat blackish brown; on either side of the throat a broad crescentic band of shining emerald green; under surface bronzy green; under tail-coverts bronzy green, fading into white on the edges of the feathers; wings purplish brown; tail dark brown with a bronzy lustre; bill blackish brown; feet yellowish brown.

Total length, 8¾ inches; bill, 4; wing, 3; tail, 2¼; tarsus, ¼.

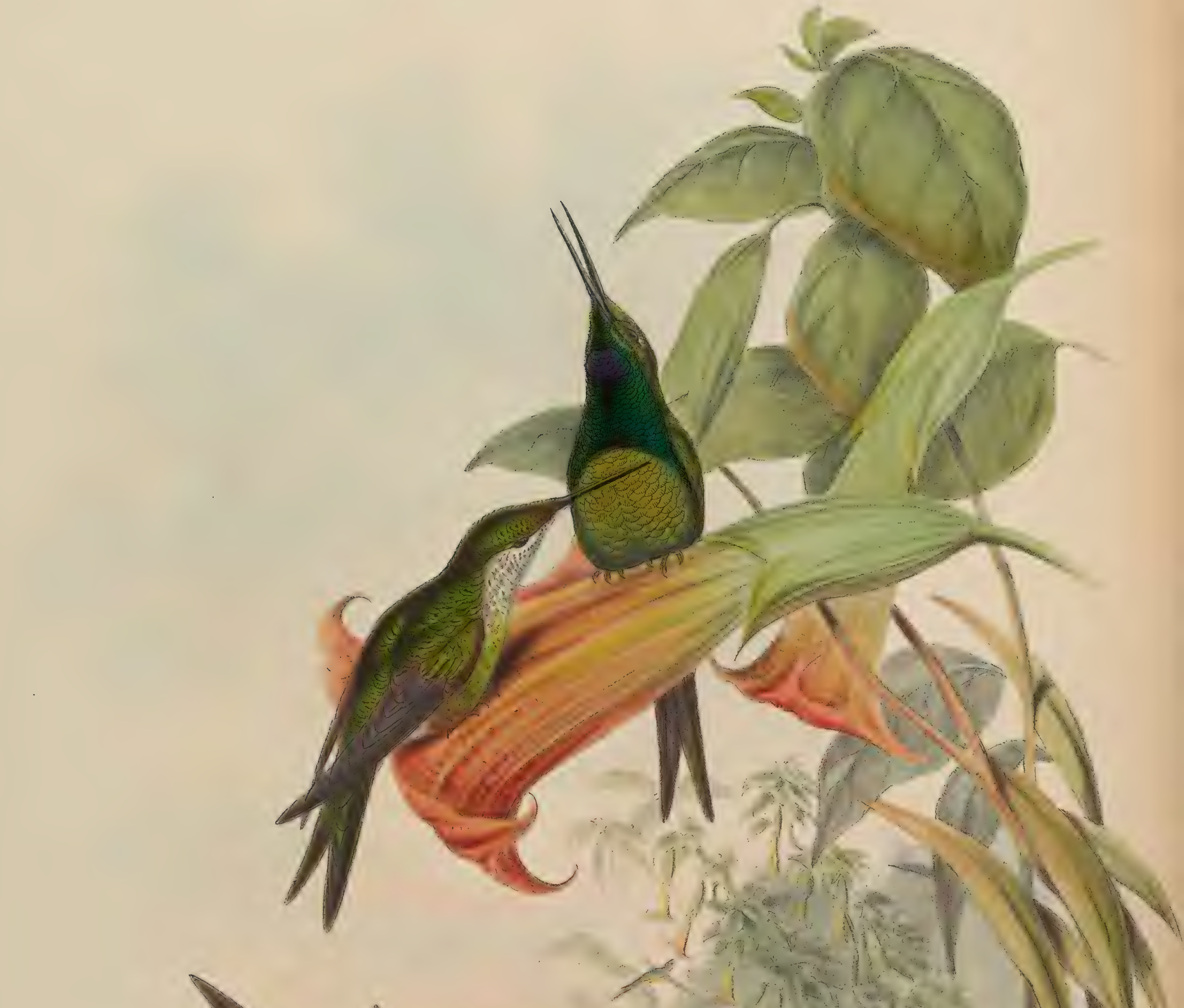
The female has the upper surface as in the male, except that a few white feathers appear on the lower part of the back; a line of white is also perceptible behind the eye; wings purplish brown; tail olive-green; throat brown, each feather margined with gray; under surface bronzy green, mottled with brown, and an indication of the bright bands on either side of the throat.

Total length, 6½ inches; bill, 3; wing, 3; tail, 2¼; tarsus, ¼.

The upper surface of the young male is of a more coppery hue than that of the adult; the throat is mottled brown and white, produced by each feather having an oblong spot of brown at the tip; on either side of the throat a band of lustrous green with bronzy reflexions, amidst which the white bases of the feathers here and there appear; under surface coppery green, interrupted in like manner by the white bases of the feathers; under tail-coverts green, slightly margined with white.

Much variation is found in the length of the bill in different individuals; I have remarked too that the young males of the year have longer bills than the adults; one of the former in my own collection measures four inches and three-eighths from the gape to the tip.

The figures represent an adult male and female, and a young male, all of the natural size, on the Scarlet Trumpet Flower (*Brugmansia sanguinea*).



EUGENIA IMPERATRIX, *Gould*

J Gould and H.C. Richter, del. et lith.

Hullmandel & Walton, Imp.

EUGENIA IMPERATRIX, *Gould.*

Empress Humming Bird.

Eugenia Imperatrix, Gould in Proc. of Zool. Soc. 1855, part xxiii. p. 192.—Athenæum, Nov. 17, 1855.

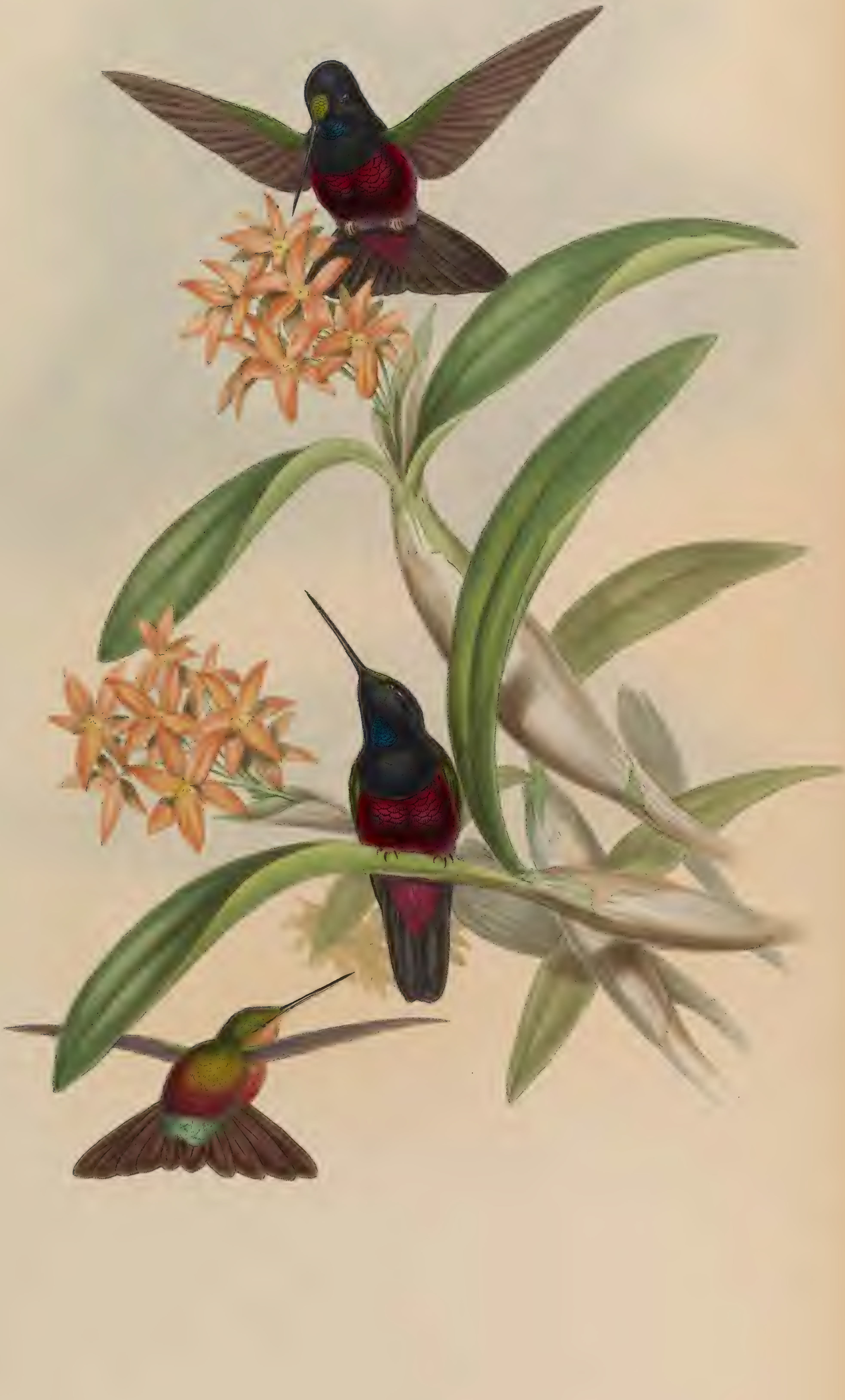
On commencing the present Monograph of the Trochilidæ, I felt assured that, much as had been done, and splendid as were the collections in the possession of individuals and museums, more remained to be accomplished for a complete history of this important group of birds, and that the trackless forests and mountain districts of South America would, on exploration, be found to be tenanted by other novelties; and the acquisition of many new species, through the researches of the enterprising travellers who have of late years visited that country, has proved that my conjectures were not illusory. For the present remarkable species I am indebted to my friend Professor Jameson, of Quito, who discovered it in the temperate forests of the Ecuadorian Andes, extracting its food from a flower resembling that of the *Daturæ*. In reply to a letter I addressed to Mr. Jameson, asking for any particulars he could send me respecting this species, that gentleman says, "When your letter reached me, I was preparing to set out on an expedition to Cayambe, with the view of adding a few novelties to my botanical collections; but observing how pleased you were with the bird I last sent you, I preferred visiting once more the locality it inhabits. Descending a mountain-ridge, elevated about 11,000 feet above the sea-level, we enter a thick forest, extending to the shores of the Pacific. I have frequently travelled over the same ground, and have always derived great pleasure from observing the gradation of animal and vegetable life, so remarkable on the declivity of the Andes. At about 7000 feet there is at this season in flower a plant of extreme beauty, an *Alstrœmeria* twining round the forest-trees, and bearing at the extremity of the stem a dense umbel of bell-shaped blossoms of two distinct colours, the outer petals being of a delicate rose colour, and the inner snow-white, spotted with dark purple; here this fine bird is sometimes to be found, attracted apparently by the *Alstrœmeria*, whose range appears to be confined within very narrow limits. Upon the present occasion I was so fortunate as to procure another example, which I send you herewith."

The *Eugenia Imperatrix* is remarkable for its large size, deeply forked tail, and the harmonious hues of its plumage, which, although less glittering and metallic than in many other species, is nevertheless strikingly beautiful. The name of *Victoria regia* having been given to one of the finest flowers of South America, I have dedicated this new Humming Bird to the Empress of the French, as a just tribute to one, whose many virtues add lustre to the lofty position in which she is placed.

Face and fore part of the neck brilliant grass-green; crown of the head, back, neck, chest, and upper part of the flanks very deep green; on the centre of the throat a gorget of reddish violet; abdomen and under tail-coverts shining greenish yellow; wings purplish brown; tail deeply forked, the feathers black, narrow, and rigid; some tufts of white downy feathers across the lower part of the abdomen; thighs brown in front, white behind.

Female: upper surface green; throat, chest, and abdomen greyish white, spangled with green, the spangles being very minute on the throat, and gradually increasing in size downward to the flanks; tail blackish brown; tarsi white.

The Plate represents two males and a female on a species of *Datura*, all of the natural size.



HELIANTHEA TYPICA.

J Gould and H C Richter, del et lith

Hullmandel & Walton, Imp

HELIANTHEA TYPICA.

Star-frontlet.

Ornismya helianthea, Less. Rev. Zool. 1838, p. 314.

Mellisuga helianthea, Gray and Mitch. Gen. of Birds, vol. i. p. 112, *Mellisuga*, sp. 6.

Helianthea typica, Bonap. Consp. Gen. Av., p. 74, *Helianthea*, sp. 1.—Ib. Consp. Troch. in Rev. et Mag. de Zool. 1854, p. 251.

I BELIEVE the honour of first describing this fine species is due to M. Lesson, who gave it the name of *helianthea*, in the "Revue Zoologique" for 1838. In France it is known by the trivial appellation of "*Fils du Soleil*," and in Bogota by that of "*La Esmeralda*." During the last twenty years, or from the date when the species first came under the notice of ornithologists to the present time, many thousand examples have fallen before the blow-pipe of the Columbian Indians, who, having been supplied with preservative preparations and taught how to skin them, visit the native retreat of the bird when its plumage is in the finest condition, kill and prepare vast numbers, and afterwards sell them to the European residents in the city of Bogota, who again either transmit them to London or Paris, or convert them into ornaments of various kinds; hence it is that this species is so common in all our collections. If this wholesale destruction was generally practised, the total extirpation of this fine species would be the inevitable consequence; but such a result is fortunately obviated by the great range the bird enjoys, extending to five or six degrees on each side of Bogota, which appears to be the centre of the area. I may here mention that Pamplona specimens are rather larger and generally of a darker hue than those from the neighbourhood of Bogota; I do not, however, regard them otherwise than as local varieties. Mr. Mark, Her Majesty's Consul at Bogota, informs me that the bird is there known by the name of "La Esmeralda," from the mark over the forehead; that one of its favourite haunts is the Paramos or desert district behind the city, at an elevation of from nine to ten thousand feet; and that it is exceedingly numerous there when the wild guava, a shrubby plant covering considerable tracts, is in flower.

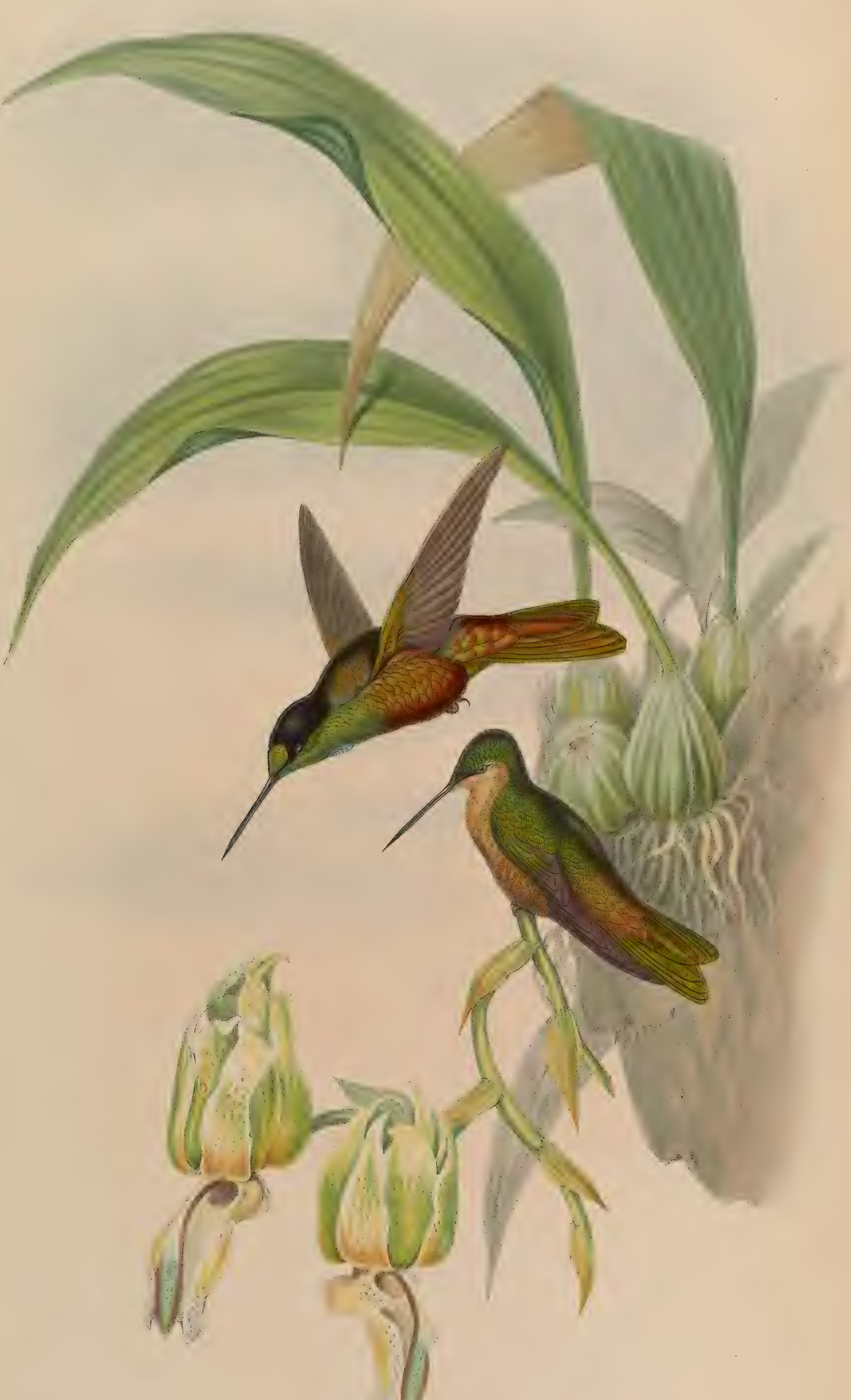
The female, though less beautiful and differing greatly in the style and markings of her plumage, has many varied and sparkling tints on the lower part of the back and upper tail-coverts, which, glowing with a metallic lustre, defy the skill of the artist to depict them.

The male has: on the forehead a spot of luminous metallic green; lores, crown of the head and occiput velvety black; back, wing-coverts, sides of the neck, throat and breast velvety black, glossed with bronzy green; in the centre of the throat a small gorget-like mark of deep shining blue; wings very dark purplish brown; upper tail-coverts dark iridescent metallic purplish green; abdomen rich deep metallic lilaceous crimson; under tail-coverts deep maroon, glossed and tipped with purple; tail very dark olive; bill black.

In Pamplona specimens the abdomen is of a deeper hue and has a tinge of dark green; the under tail-coverts are of a still deeper maroon, and largely tipped with iridescent metallic bluish green.

The female has the head, shoulders, wing-coverts and sides of the neck bronzy green, deepening into coppery bronze on the lower part of the back; rump and upper tail-coverts as in the male, but with a more olive tinge; centre of the throat deep buff; abdominal feathers deep buff, tipped with metallic crimson; vent and under tail-coverts buff, the latter with bronzy centres.

The Plate represents two males and a female of the natural size; the plant is the *Epidendrum aurantiacum*.



HELIANTHEA BONAPARTEI.

J Gould and H C Richter, del et lith

Hullmandel & Walton Imp

HELIANTHEA BONAPARTEI.

Bonaparte's Star-frontlet.

Ornismia Bonapartei, Boiss. Rev. Zool. 1840, p. 6.—Bourc. Ann. Sci. Phys. &c. de Lyon, tom. v. p. 307, pl. xiv.

Trochilus aurigaster, Lodd.

Mellisuga Bonapartei, Gray and Mitch. Gen. of Birds, vol. i. p. 112, *Mellisuga*, sp. 8.

Helianthea bonapartii, Bonap. Consp. Gen. Av., p. 74, *Helianthea*, sp. 2.

——— *Bonaparti*, Bonap. Consp. Troch. in Rev. et Mag. de Zool. 1854, p. 251.

Although inhabiting the same country, this beautiful Humming-Bird has not been so long known to European ornithologists as the *Helianthea typica*, the first description of it having appeared so recently as 1840.

In dedicating this species to Prince Charles Lucien Bonaparte, M. Boissoneau states that he desires to do honour to one of the most learned ornithologists of our time; and never certainly was a compliment of this kind more appropriately bestowed, since no one has done more, and few so much, to advance this department of science than that accomplished and amiable man.

The remarks I have made respecting the destruction of the *Helianthea typica* by the Indian hunters, apply with greater force to the present species, which, owing to its greater beauty, is even more diligently sought after; being, however, a far less numerous species, a much smaller number are collected. Bogota is the locality whence the greater number of the specimens sent to London and Paris are despatched; but I suspect that this is not the centre of the area over which the bird ranges, and have some reasons for believing that it is more abundant to the southward, in the direction of Popayan, where, as its rich colours would lead us to imagine, it dwells in a warmer climate; the bleak Paramos then are not its favourite abode; but the more genial regions below, at an elevation of from three thousand five hundred to six thousand feet, constitute a habitat congenial to its mode of life.

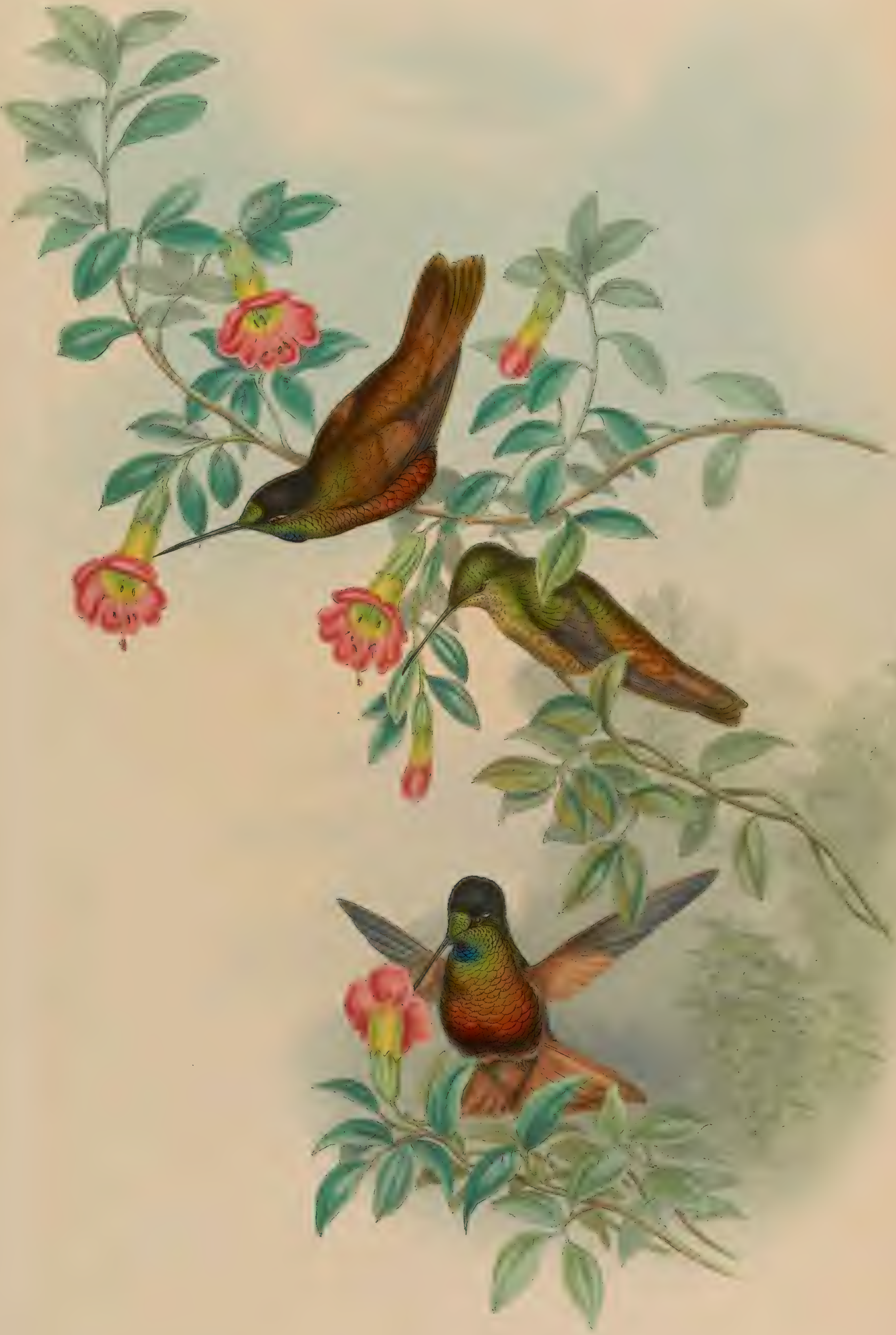
The *Helianthea Bonapartei* is certainly one of the most beautiful members of its genus. Mr. Mark tells me that the Spanish residents in Bogota call it "La Dorada," or Golden Humming Bird, and "Siete colores," or Seven colours, and that it is the universal favourite; this gentleman also states that in the spring months it is frequently met with near the villages of Guaduas and Fusugasuga, situate about two days' journey from Bogota.

The sexes present the same differences that are found to exist in the *Helianthea typica*.

The male has: on the forehead a spot of luminous metallic green; lores, crown of the head and occiput velvety black; back, wing-coverts and sides of the neck dark bronzy green; rump and upper tail-coverts shining coppery red; wings purple-brown; throat and chest brilliant metallic green, with a gorget-shaped mark of deep shining blue in the centre of the former; abdomen resplendent metallic coppery red or flame-colour; tail and under tail-coverts bronze; bill black.

The female has the upper surface bronzy green, deepening into coppery bronze on the upper tail-coverts; throat buff; feathers of the sides of the neck and breast tipped with green; under tail-coverts buff.

The figures represent the two sexes of the size of life. The beautiful orchid is the *Stanhopea saccata*.



HELIANTHEA EOS, *Gould*

J Gould and H.C Richter, del. et lith

Hullmandel & Walton, Imp

HELIANTHEA EOS, *Gould.*

Golden Star-frontlet.

Helianthea Eos, Gould in Proc. of Zool. Soc. 1848, p. 11, Aves, pl. 1.
Mellisuga eos, Gray and Mitch. Gen. of Birds, vol. iii. App. p. 5, App. to p. 113.
Helianthea eos, Bonap. Consp. Gen. Av., p. 75, *Helianthea,* sp. 5.—Ib. Rev. et Mag. de Zool 1854, p. 251.
Hypochrysia Eos, Reichenb. Aufz. der Colibris, p. 9.

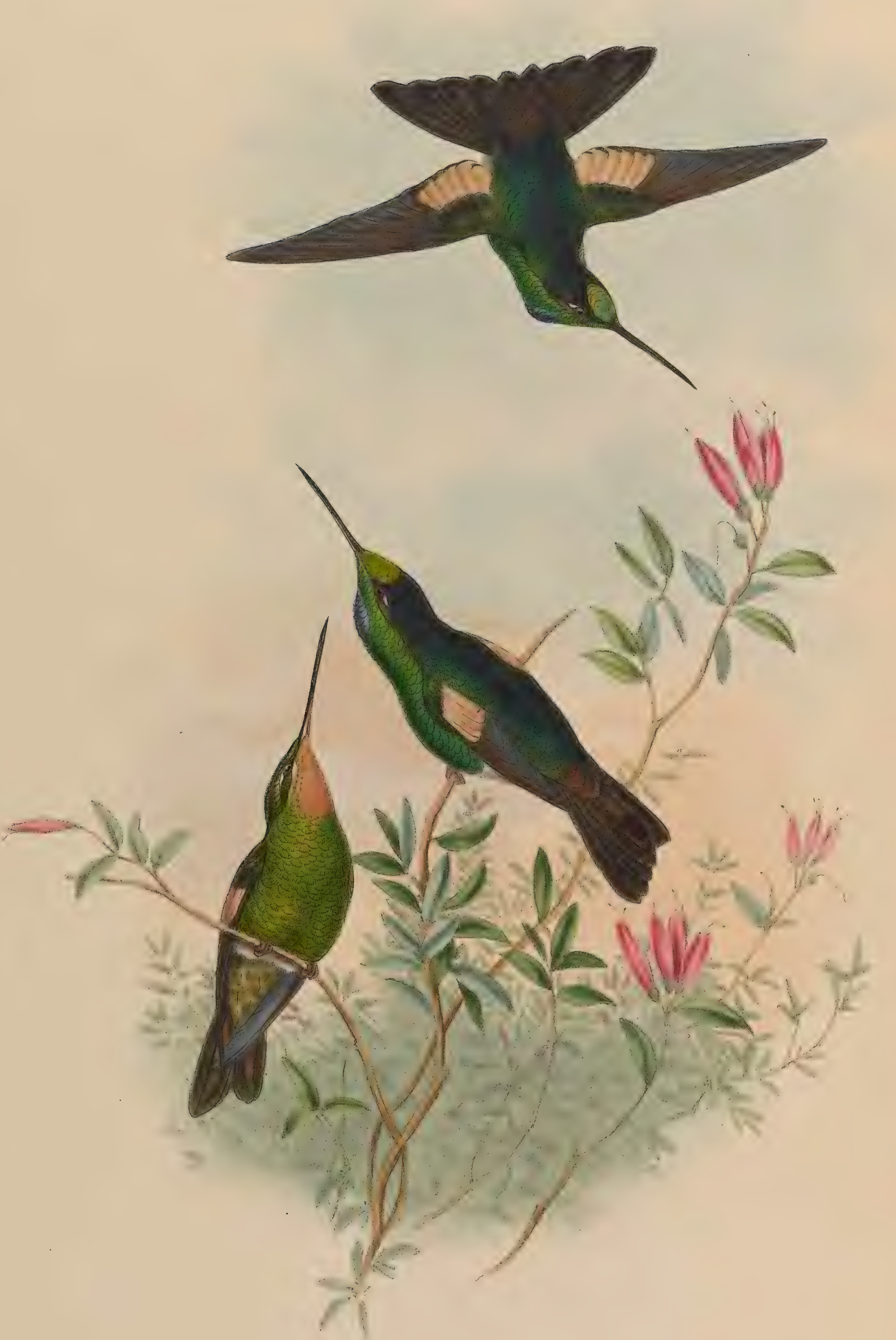
The South American travellers Linden, Funck and Schlim will have their names handed down to posterity quite as much for having collected the first specimens of some of the finest species of the *Trochilidæ,* as for their discoveries of the beautiful Orchids and other Andean groups of plants, which they have from time to time transmitted to Europe. The lovely Humming Bird here represented is one of the many novelties which rewarded the researches of those gentlemen during their rambles in New Grenada: it was transmitted to me direct in 1848, when I gave it the name of *Eos,* a specific appellation suggested by the transcendently rich golden hue which pervades the whole of the plumage. In size and structure this fine species very closely assimilates to the *H. Bonaparti,* but may be at once distinguished by the glittering golden hue of the under surface, extending on to the chest and neck; by the deep rufous colouring of the secondaries, and by the rufous colouring of the tail. In a letter received from Mr. Linden, that gentleman states, that Messrs. Funck and Schlim found this bird in the Paramos de los Conejos, near Merida, at an elevation of from 8000 to 10,000 feet; further than this, I regret to say, nothing is known respecting it. It doubtless represents, in the fine country above mentioned, the beautiful *H. Bonaparti* of Bogota.

The female differs considerably from the male, in not being adorned with half his brilliancy of colouring; in size and conformation, however, they differ much less than the sexes of many other species.

The male has a spot of luminous metallic green on the forehead; lores, crown of the head and occiput velvety black; fore part of the neck and chest lustrous golden green, blending on the chest into the rich shining flame-colour of the abdomen; on the centre of the throat a patch of rich deep purplish blue; back, wing- and upper tail-coverts bronzy orange; tail cinnamon-brown, the apical half of the two middle tail-feathers and the tips of the remainder with a bronzy lustre; primaries chocolate-brown; secondaries rufous, forming a conspicuous mark on the wing; bill black; feet light brown.

The female is similar in colour, but her hues are much less resplendent, and she is entirely destitute of the spot of green on the forehead and the patch of blue on the throat.

The figures represent two males and a female of the natural size. The plant is the *Cantua bicolor.*



HELIANTHEA LUTETIÆ.

J. Gould and H. C. Richter, del et lith.

Hullmandel & Walton Imp.

HELIANTHEA LUTETIÆ.

Comte de Paris.

Trochilus Lutetiæ, DeLatt. et Bourc. Rev. Zool. 1846, p. 307.
Mellisuga lutetiæ, Gray and Mitch. Gen. of Birds, vol. i. p. 112, *Mellisuga*, sp. 7.
Helianthea lutetiae, Bonap. Consp. Gen. Av., p. 74, *Helianthea*, sp. 3.—Reich. Aufz. der Col., p. 9.
———— *lutetiæ*, Bonap. Rev. et Mag. de Zool. 1854, p. 251.

The *Helianthea Lutetiæ* may fairly rank among the finest species of its genus. In size it surpasses the *H. typica* and *H. Eos*, from which, and indeed from every other known species, it differs in the uniform deep grass-green of the chest and abdomen, and, with the exception of *H. Eos*, in the bright buff colouring of the secondaries, forming a conspicuous mark like an epaulet near the shoulders. The native habitat of this fine species is Ecuador, in which country it takes the place of the *H. Bonaparti*, *H. typica*, and *H. Eos* of Columbia, and the *H. violifera* of Peru. I believe its discovery to be due to the researches of the late M. DeLattre, who, in conjunction with M. Bourcier, named it *Lutetiæ* in honour of the Comte de Paris as a compliment to his illustrious father, the late Duke of Orleans, who by his patronage of the natural sciences contributed so largely to their development.

As is usual in this genus, the sexes differ very considerably in their colouring. The females of all the species, however, are very similar; but the female of *H. Lutetiæ* having the buffy epaulet-like mark on the shoulder, it is impossible to mistake the species to which it pertains.

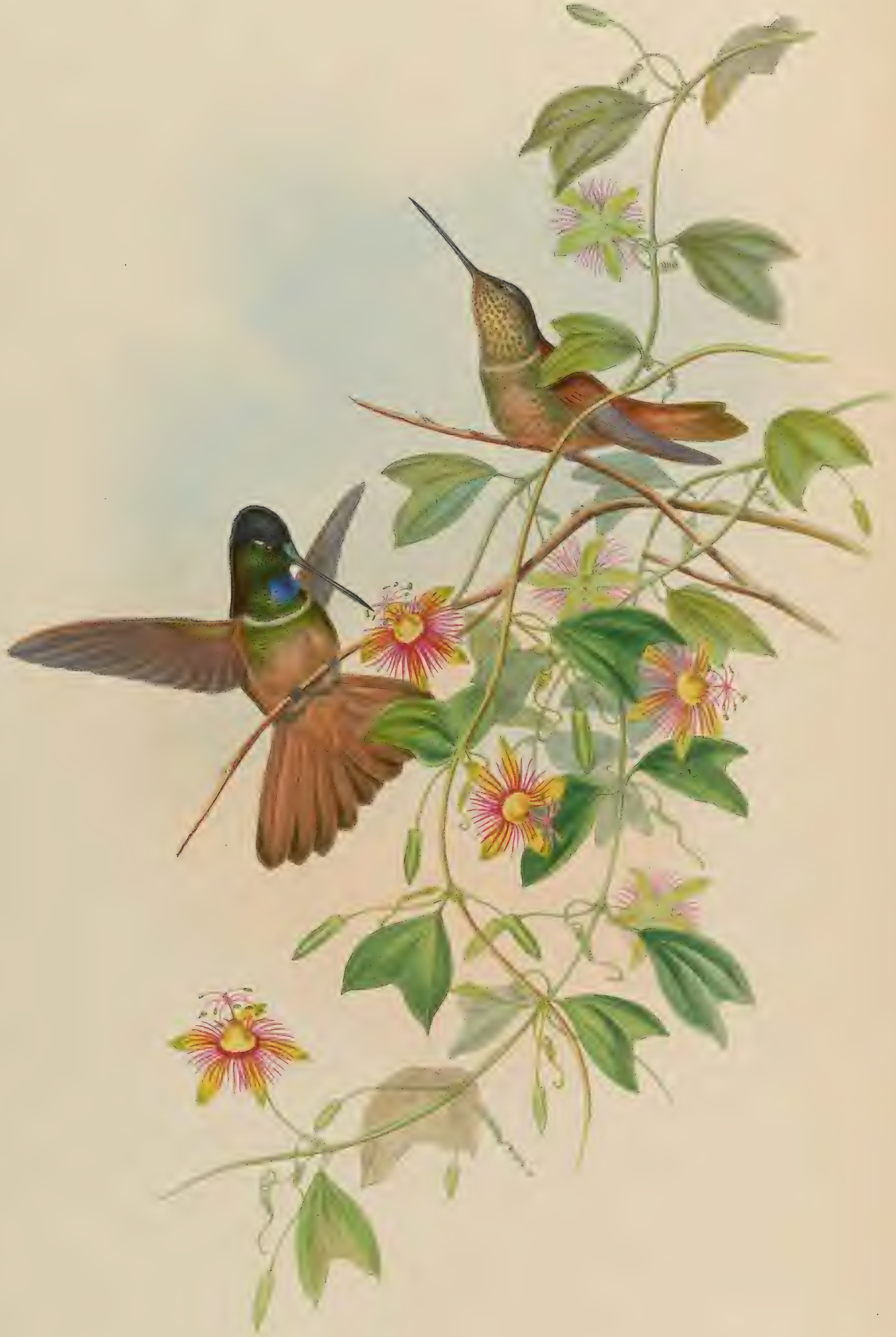
The *Helianthea Lutetiæ* appears to be very common in the neighbourhood of Quito, as is evidenced by the numerous examples obtained by Professor Jameson, M. Bourcier, and every collector who has visited those regions. The specimens from which the original description was taken were procured by M. DeLattre on the Volcano of Purace near Popayan.

I am indebted to M. Bourcier for the loan of the drawing of the interesting plant figured on the accompanying Plate.

The male has a spot of glittering metallic green on the forehead; the sides of the head, crown, and back of the neck velvety-black; upper surface brownish-black glossed with green; wing-coverts dark green; wings purplish-brown, with the exception of the secondaries, which are buff, forming a conspicuous mark near the shoulder; tail dark bronzy-brown; under surface shining deep grass-green, with a spot of rich metallic steel-blue in the centre of the throat; bill black; feet brown.

The female has the crown of the head and upper surface bronzy-green; wings and tail as in the male; chin and centre of the throat deep sandy-buff; under surface bronzy-green.

The Plate represents the sexes of the natural size.



HELIANTHE [illegible]

J Gould and H C Richter del et lith

HELIANTHEA VIOLIFERA, *Gould.*

Violet-throated Star-frontlet.

Trochilus (——— ?) *violifer*, Gould in Proc. of Zool. Soc., part xiv. p. 87.
Mellisuga violifera, Gray and Mitch. Gen. of Birds, vol. i. p. 112, *Mellisuga*, sp. 9.
Helianthea violifer, Bonap. Consp. Gen. Av., p. 75, *Helianthea*, sp. 4.
——— *violifera*, Ib. Rev. et Mag. de Zool. 1854, p. 251.—Reichenb. Aufz. der Colibris, p. 9.

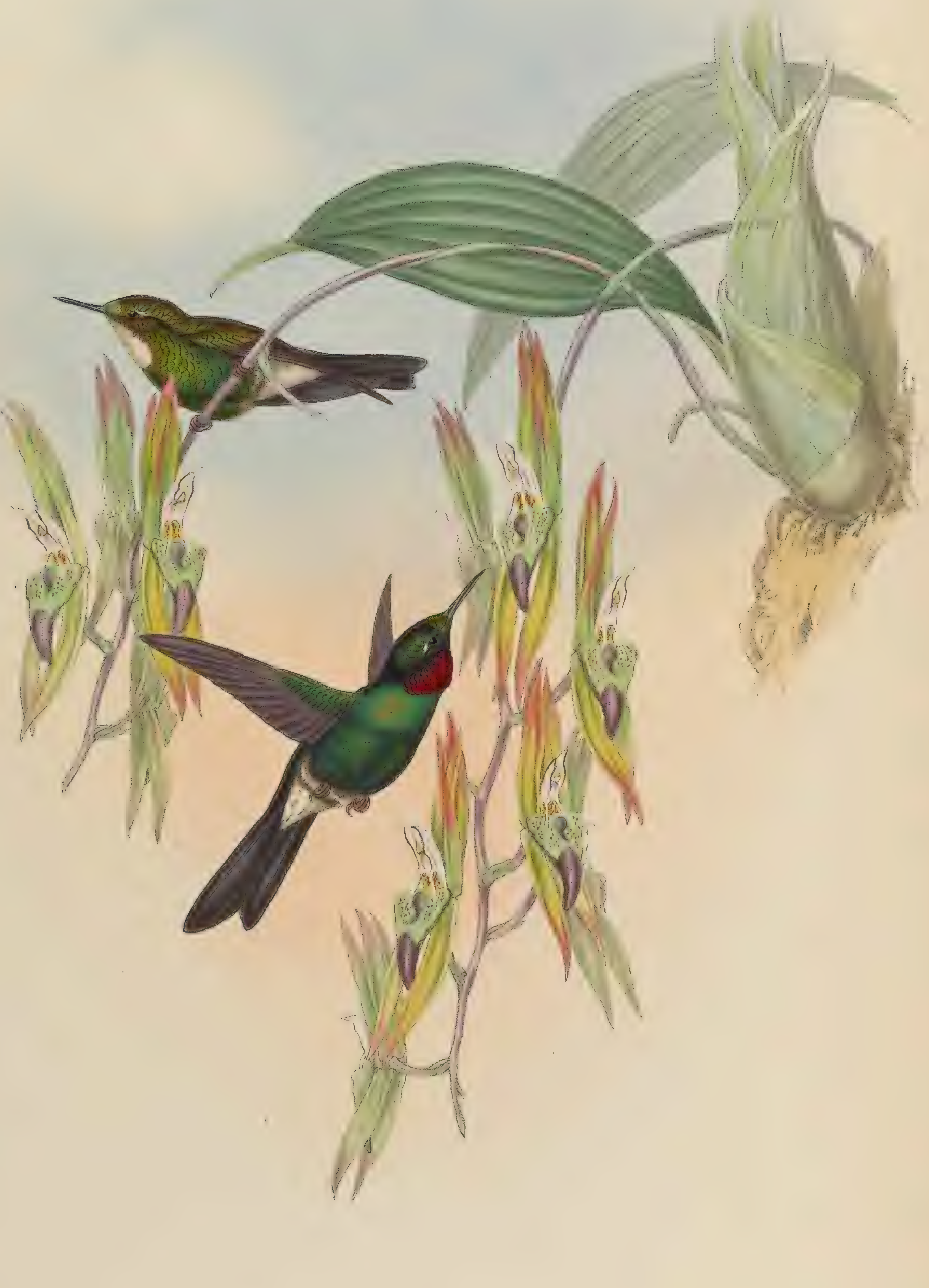
The first specimens I received of this new species of *Helianthea* were sent to me by Mr. Bridges of Valparaiso, who collected them during his journey into the interior of Bolivia: subsequently others were forwarded to me from the same country, and also from Peru, by M. Warszewicz; Southern Peru and Bolivia, then, appear to be its true habitat. The locality given by Mr. Bridges is the warm region of Sandillani New Road, Yungas of La Paz in Bolivia; that by M. Warszewicz is the Province of Chulimania in the Cordillera of Peru, at an elevation of from 3000 to 6000 feet, where it greatly affects the flowers of *Salvia longiflora*. The total absence of any fine colouring on the under surface of this bird has almost induced me to give it a separate generic appellation; but, after again and again carefully comparing it with the other species of the form, I hesitate from so doing. It has the usual star-frontlet and blue throat-mark, but the former character is developed in a very much less degree than in any of its congeners: it also differs from the other *Heliantheæ* in having an obscure band of white on the lower part of the neck. It has a longer bill than either of them, and, moreover, is a somewhat larger bird.

The sexes differ in accordance with the figures on the accompanying Plate.

The male has the head, back of the neck, chin, ear-coverts and breast dark green, so deep, in fact, that when viewed in front, the head appears to be black; in the centre of the throat a patch of violet-blue; across the lower part of the throat a narrow band of white; back and rump golden green; abdomen, upper and under tail-coverts light rufous; tail light rufous, the apical third of the two central, and the tips of the remainder washed with bronzy green; wings purplish brown, with the external edge of the first primary rufous; bill black.

The female has the throat rufous, mottled with green, in lieu of the green and violet colouring of that part of the male.

The figures are the size of life. The plant is the *Passiflora Medusæa*.



HELIOTRYPHA PARZUDAKI.

J. Gould and H.C. Richter del et lith.

Hullmandel & Walton Imp.

HELIOTRYPHA PARZUDAKI.

Parzudaki's Star-frontlet.

Ornismya Parzudaki, Long. et Parz. Rev. Zool. 1840, p. 72.
Mellisuga Parzudaki, Gray and Mitch. Gen. of Birds, vol. i. p. 112, *Mellisuga*, sp. 18.
Heliangelus Parzudaki, Bonap. Consp. Gen. Av., p. 76, *Heliangelus*, sp. 4.
Heliotrypha Parzudakii, Bonap. Rev. et Mag. de Zool., 1854, p. 252.—Sclat. in Proc. of Zool. Soc., part xxii. p. 40.
Trochilus exortis, Fras. Proc. of Zool. Soc., part viii. p. 14.
Parzudakia dispar, Reichenb. Auf. der Col., p. 12.

Two very different birds—inhabitants of distant countries—have evidently been confounded under the specific name of *Parzudaki*; this has, I think, been clearly and rightly pointed out by my good friend Reichenbach, who considers the *Parzudaki* of Lesson in the 'Revue Zoologique' for 1838, p. 315, to be different from the *Ornismya Parzudaki* described in the same work two years later.

The description published in 1838 doubtless refers to the rare little bird inhabiting Cuba, and now so well known to Trochilidists as the *Orthorhynchus Riccordii* of Ramon de la Sagra, the *Sporadinus Riccordi* of Bonaparte and later writers. The bird described in 1840, which is an inhabitant of Bogota and the Andean ranges to the northward of that province, is equally well known to all who have paid any attention to this group of birds, as well as to every dealer in bird-skins, as the "*Parzudaki.*" Under these circumstances, I have considered it best to retain this name for the bird here represented, which is a finer and more beautiful species than the bird inhabiting Cuba.

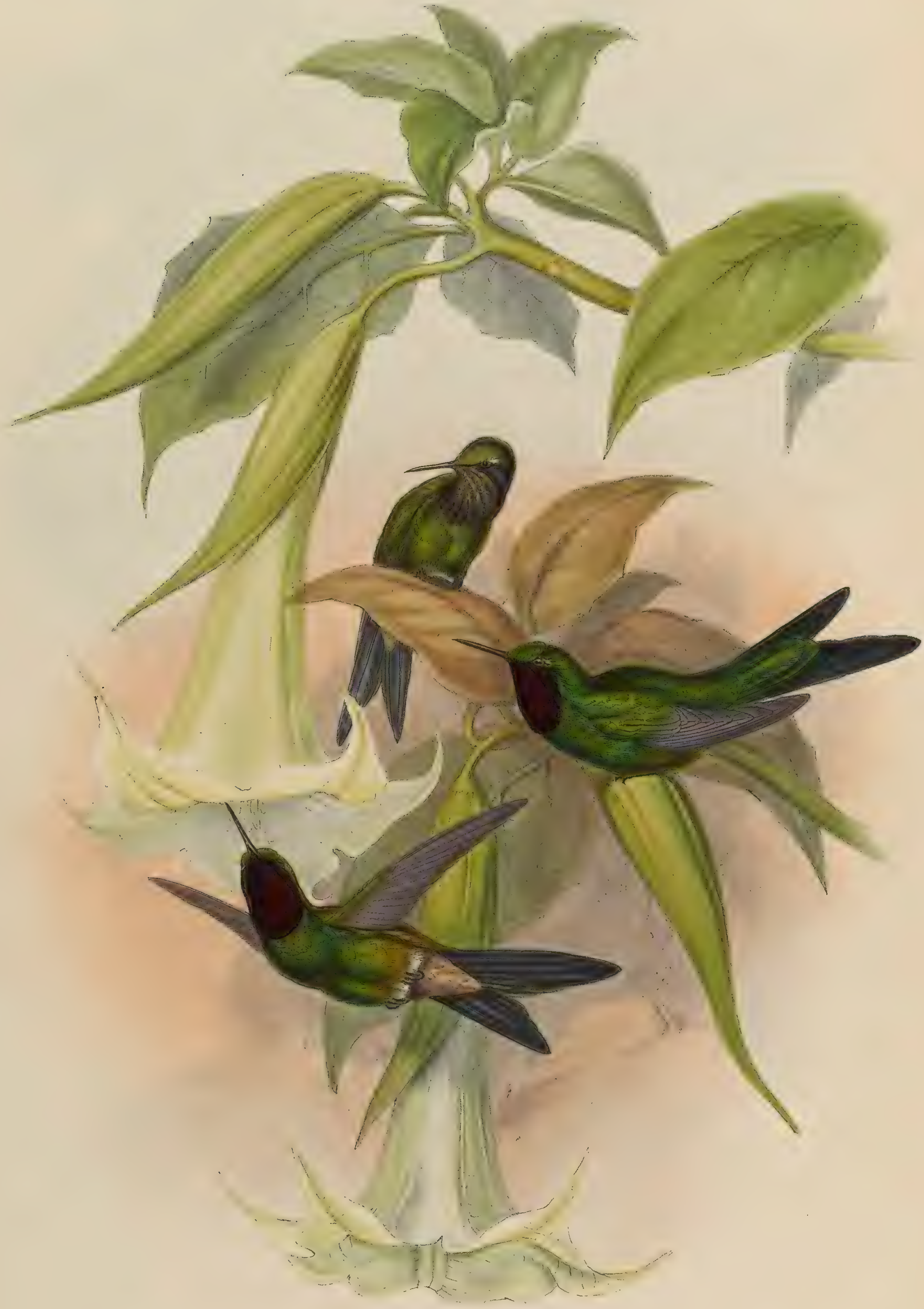
So much on the subject of the nomenclature of the bird; a little, and only a little more remains to be said respecting its history, where it occurs in a state of nature, &c. Since the attention of collectors has been directed to the rich stores of the great Andean ranges, this bird has been sent from thence in such numbers that it has become quite a drug in the bird-market. The great emporium of Bogota is the source from which it has been mostly sent; but I possess examples collected at Popayan and in the more southern country of Quito. The specimens from the last-mentioned locality were sent to me by Professor Jameson, who had procured them in the warm forests of Papallacta, which I believe is the extreme limit of its range in a southerly direction. The intermediate country of Popayan would appear to be the centre of the area over which it extends, as I have never seen examples from any locality northward of Bogota or southward of Quito.

In its general contour the *Heliotrypha Parzudaki* is as elegant as in its colouring it is beautiful.

The male has a minute spot of luminous green on the forehead, at the base of the upper mandible; on the chin a patch of deep indigo-blue; down the centre of the throat a broad mark of metallic lilaceous crimson, below which is a broad crescentic band of glittering green; crown of the head, all the upper surface, wing-coverts, tail-coverts, flanks, and abdomen dark green, brightest on the upper part of the back, but in certain lights the crown of the head and sides of the neck appear to be black; wings dark purplish brown; two centre tail-feathers bronzy green; the remainder dark bronzy purple; vent and under tail-coverts white, with a faint streak of brown down the centre of each feather; bill black; feet dark brown.

The female has a bar of shining metallic green on the forehead; remainder of the upper surface and the abdomen grass-green; throat brown, with a large patch of white in the centre; tail as in the male, but the outer feathers slightly tipped with grey.

The Plate represents the two sexes, of the size of life, on the beautiful Orchid called *Catasetum callosum*, var. *grandiflorum*.



HELIOTRYPHA VIOLA, *Gould.*

J. Gould and H. C. Richter, del et lith.

Hullmandel & Walton, Imp.

HELIOTRYPHA VIOLA, *Gould.*

Viola Star-frontlet.

Heliangelus viola, Gould in Proc. of Zool. Soc. April 12, 1853, reported in Athenæum April 16, 1853.

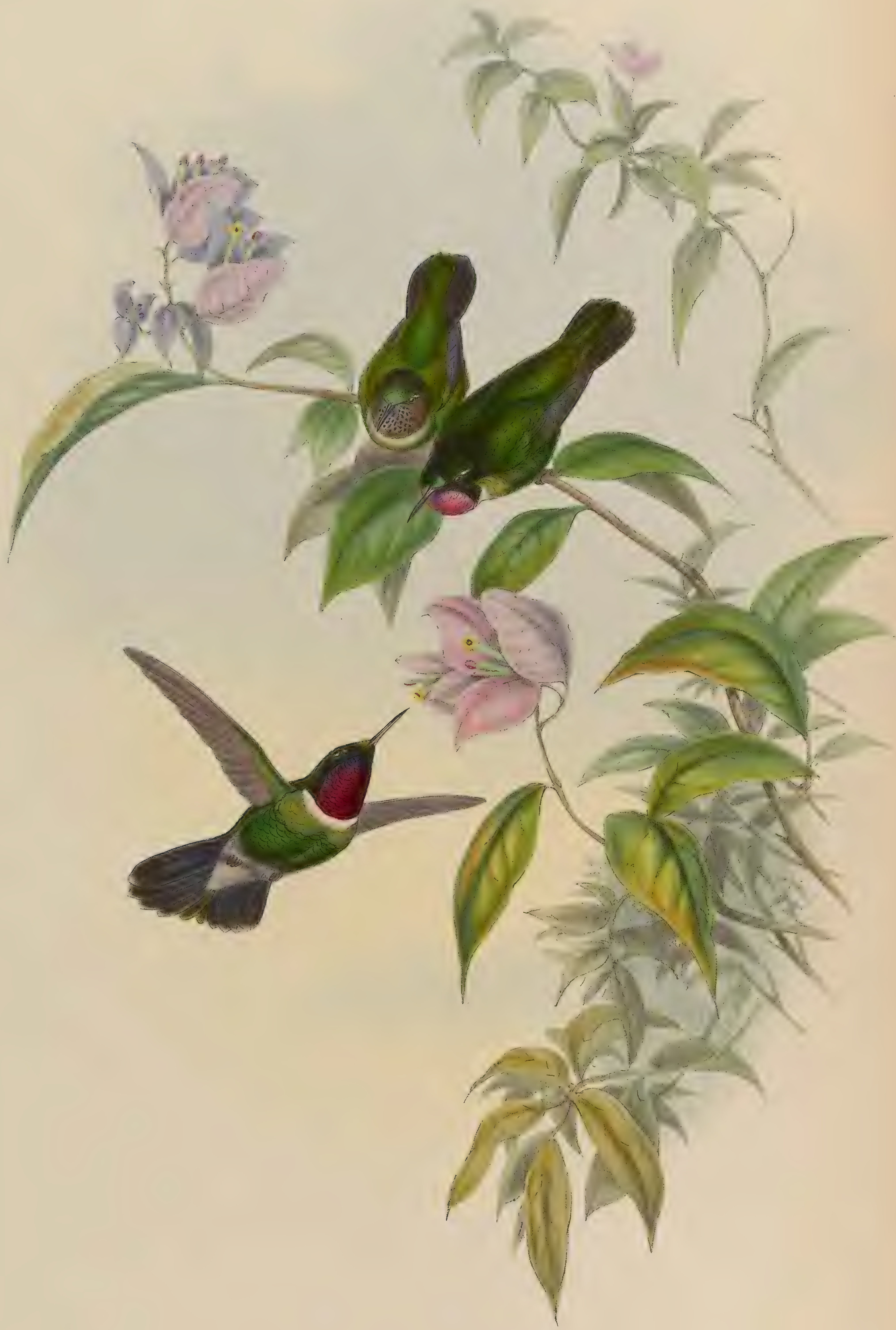
A journey lately made by M. Warszewicz on the banks of the Maranon has been the means of making known to us the present beautiful new species of Humming Bird; and it may not be out of place to mention here, that both Trochilidists and Orchidists are very largely indebted to the exertions of this intrepid traveller, who hesitates not to risk his life whenever a chance of obtaining novelties in either of those departments presents itself; and his intrepidity has hitherto been most amply rewarded, since no one has had the good fortune to add so largely to our stores of these interesting and lovely objects as M. Warszewicz; his collections of the Trochilidæ, which have all been transmitted to myself, have afforded me many opportunities of mentioning his exertions in terms of commendation, and I feel confident that George Ure Skinner, Esq., to whom his Orchids have been consigned, can speak quite as highly of his acquisitions in that department.

Whether we regard the elegance of the form of *H. viola* or the chasteness of its colouring, we know not which to admire most; and as in these respects it differs from all other Trochili, with the exception of *H. Parzudaki*, to which it is nearly allied, I have deemed it advisable to propose a new generic title—*Heliotrypha*—for this bird; the form of which is directly intermediate between *Heliangelus* and *Helianthea.*

Forehead brilliant metallic green; all the upper surface, flanks, and abdomen, rich dark green; wings purplish brown; four middle tail-feathers green, the remainder purplish black, all but the two outer ones on each side washed with green at the tip; throat rich deep violet, bounded on the sides and below by a line of deep velvety black; under tail-coverts buff, with a dark mark in the centre of each; bill and feet blackish brown.

The female is similar to, but less brilliant than the male, and moreover differs in having the throat dull black, speckled with greyish white, and the under tail-coverts buff, with green centres.

The figures represent two males and a female of the size of life. The plant is the *Datura cornigera.*



HELIANGELUS CLARISSE.

J. Gould and H. C. Richter del. et lith.

Hullmandel & Walton Imp.

HELIANGELUS CLARISSÆ.

Sun Angel.

Ornismia Clarisse, De Longuem. Rev. Zool. 1841, p. 306.—Less. Mag. de Zool. 1842, Ois., pl. 26.

Mellisuga Clarissæ, Gray and Mitch. Gen. of Birds, vol. i. p. 112, *Mellisuga*, sp. 17.

Heliangelus clarisse, Bonap. Consp. Gen. Av., p. 76, *Heliangelus*, sp. 1.

———— *clarissa*, Bonap. in Rev. et Mag. de Zool. 1854, p. 252.

Anactoria Clarissa, Reichenb. Aufz. der Colibris, &c., p. 12.

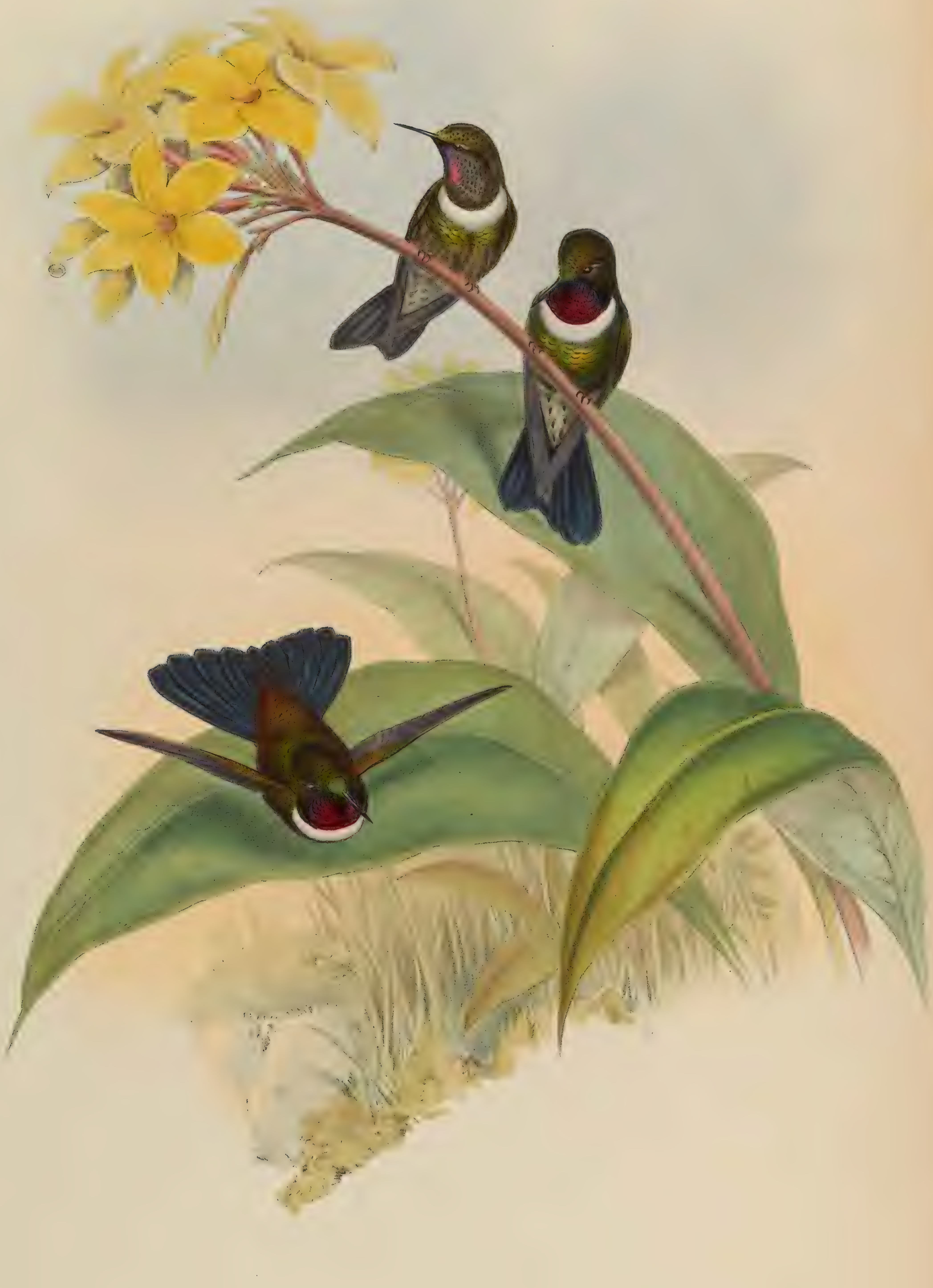
Every thousand feet of elevation from the base to the snow line of the great Cordilleran and Andean ranges, appears to be inhabited by its own peculiar species of Humming Bird, and so constantly does each keep to its own particular province, that it is the exception rather than the rule if this law be departed from; latitude also would seem to have an influence, but not in so marked a degree. This law appears to have been unknown to former naturalists, and it is only within the last twenty years that travellers and collectors have made these regions the great fields of their enterprise; but having now done so, rich indeed have been the harvests they have reaped; not only have numerous new and beautiful species been discovered, but their collection and transmission to Europe have played a part in commerce but little known to the community at large. Ordinarily the skins of birds are collected for scientific cabinets, or for the decoration of the drawing-room or other apartments; but the great beauty and glittering metallic hues of the Humming Bird have attracted the notice of the plumassier and artificial florist, and their feathers are now extensively used for the decoration of head-dresses, &c. I have known as many as two thousand examples of a single species sold at one time in Paris for such purposes alone, and the beautiful bird figured on the accompanying Plate, although not known or described until 1841, is now transmitted, particularly to France, in such abundance, that although great numbers are used for ornamental shades for the drawing-room, I believe not a few fall into the mutilating hands of the plumassiers, for the decorative purposes above mentioned.

The *Heliangelus Clarissæ* enjoys a somewhat wide range over the temperate portions of the Columbian Andes, but its head-quarters appears to be the neighbourhood of Santa Fé de Bogota, where vast multitudes are killed by the Indians with the blow-pipe, and sold to the merchants of Bogota at a very low price; by the latter they are transmitted to Europe, and, as I have before stated, principally to Paris. When seen in the full glory of its newly-moulted plumage, this bird is indeed a very beautiful object; the rich puce-colour of its throat, separated from the glittering green of the sides of the chest by a snow-white gorget, rendering it at once both attractive and conspicuous. Such, I regret to say, is the brief account that can be given of this comparatively new bird;—to other naturalists, with suitable opportunities, must pertain the pleasing task of describing its habits, manners, flight, nidification, &c., of which at present nothing is known. The bird itself was first described by M. De Longuemare, who gave it the name of *Clarissæ* in honour of Madame Parzudaki, the wife of the well-known naturalist of that name in Paris.

The male has a small spot of luminous green on the forehead; chin black; throat rich luminous violet-red or puce-colour, the blue or violaceous hue prevailing on the upper and lateral margins; below this a gorget of white, succeeded by a series of rich luminous green feathers, narrow in the centre, broad on the sides, and blending with the bronzy green of the flanks; head, upper surface and wing-coverts bronzy green, the head, however, when viewed in front, appears black; lores and sides of the neck velvety black, separating the colours of the upper and under surface of the head and neck; immediately behind the eye a very small spot of white; wings chocolate-brown; two central tail-feathers bronzy green; lateral tail-feathers dull black, becoming brown at the tip; abdomen mottled buff and bronzy green; under tail-coverts white; bill black; feet brown.

The female has a faint indication of the luminous green on the forehead; the head, upper surface and two central tail-feathers bronzy green; lateral tail-feathers black, with lighter tips; throat mottled black and brown, with, when very adult, a series of violaceous-red feathers in the centre, bounded below by a more or less defined gorget of white, and succeeded by a few luminous green feathers, far less conspicuous than in the male.

The figures are of the natural size.



HELIANGELUS STROPHIANUS, *Gould*

J Gould and H. C. Richter, del et lith *Hullmandel & Walton, Imp*

HELIANGELUS STROPHIANUS, *Gould.*

Gorgeted Sun Angel.

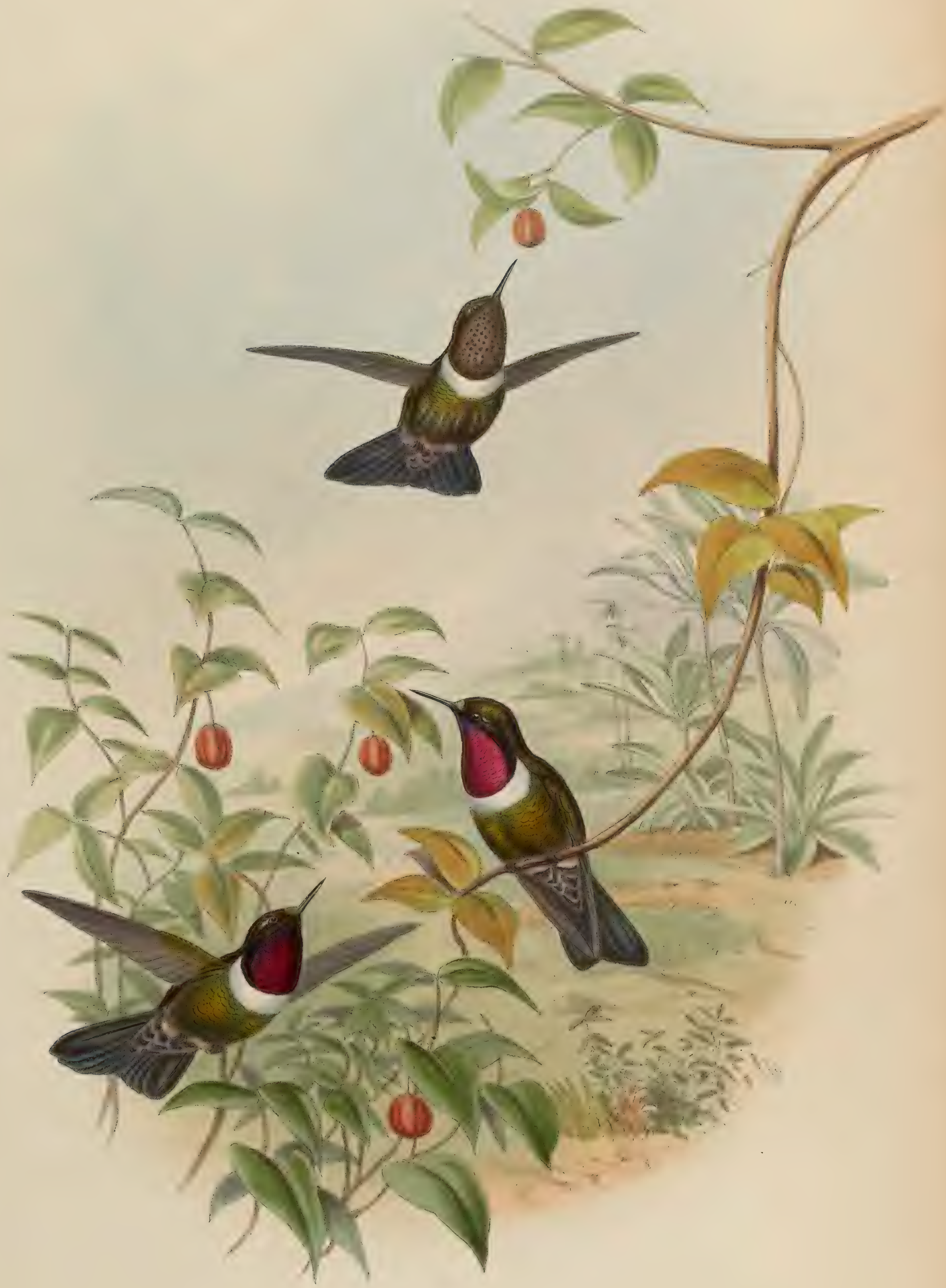
Trochilus (——— ?) *strophianus*, Gould in Proc. of Zool. Soc., part xiv. p. 45.
Mellisuga strophiana, Gray and Mitch. Gen. of Birds, vol. i. p. 112, *Mellisuga*, sp. 39.
Heliangelus strophianus, Bonap. Consp. Gen. Av., p. 76, *Heliangelus*, sp. 5.—Ib. Rev. et Mag. de Zool. 1854, p. 252.
Anactoria Strophiana, Reichenb. Aufz. der Colibris, p. 12.

Although the *Heliangelus strophianus* presents the general appearance of *H. Clarissæ*, it nevertheless possesses several peculiarities by which it may be at once distinguished from that species: thus, it is a larger and more powerful bird; has a shorter bill; a more distinctly defined and whiter gorget; the tail entirely steel-black, with elongated outer feathers, giving that organ a forked form; the crown of the head green; the lower part of the back strongly tinged with brown; and the sides of the chest and lower part of the abdomen of a deeper grass-green. The native country of this fine species is Ecuador and Northern Peru, to which it appears to be confined; for I have never seen an example from Bogota, its place there being supplied by *H. Clarissæ*, and in Bolivia by *H. amethysticollis*. Many specimens were brought to Europe by M. Bourcier, and some fine male examples have been transmitted to me by my friend Professor Jameson, who collected them in the neighbourhood of Quito, which I regard as the head-quarters of the species.

The male has a spot of luminous green on the forehead; the crown of the head, all the upper surface and abdomen dull green; behind the eye a small spot of white; chin black; throat rich violet-red or puce-colour, the blue or violet hue slightly increased on the upper and lateral margins; below this a clearly defined gorget of white; rump and upper tail-coverts greenish brown; centre of the back, wing-coverts and under surface green; lores and sides of the neck black; wings purplish black; tail steel- or bluish black; under tail-coverts white, streaked with dark brown; bill black; feet brown.

The female has a faint indication of the luminous mark on the forehead; head, upper surface and two central tail-feathers bronzy green, lateral tail-feathers black; throat dull mottled black and brown, and a slight indication of the white gorget.

The figures are of the natural size. The plant is the *Plumieria Jamesoni*.



HELIANGELUS SPENCEI.

J Gould and H C Richter, del et lith

Hullmandel & Walton, Imp.

HELIANGELUS SPENCEI.

Spence's Sun Angel.

Trochilus Spencei, Bourc. in Proc. of Zool. Soc., part xv. p. 46.—Ib. Rev. Zool. 1847, p. 258.
Mellisuga Spencei, Gray and Mitch. Gen. of Birds, vol. i. p. 112, *Mellisuga*, sp. 41.
Heliangelus spencii, Bonap. Consp. Gen. Av., p. 76, *Heliangelus*, sp. 2.—Ib. Rev. et Mag. de Zool. 1854, p. 252.
Diotima Spencei, Reichenb. Aufz. der Colibris, p. 12.

Up to the present time no species of the genus *Heliangelus* has been found to the northward of the Isthmus of Panama;—Central America in fact appears, with few exceptions, to have an ornithology peculiarly its own;—the *H. Spencei*, however, approaches the line of demarcation more nearly than any other, inhabiting, as it does, the extreme northern limit of the country called Columbia. My specimens are from the Sierra Nevada de Merida, where they were procured a few years since, and sent to this country by the botanical travellers Messrs. Funck and Schlim. It is not only a very rare and very beautiful species, but (which is of more importance to the ornithologist, especially one who has undertaken the office of historian of this lovely group) exhibits characters which at once distinguish it from every other member of the genus. These peculiar features consist in the quiet subdued colouring of the violaceous throat, the feathers of which are less glittering or metallic than in any of the other species, in the brilliant spot on the forehead being of a silvery or glaucous green, instead of brilliant grass-green, and in the band across the breast being both broader and of a more snowy whiteness. The colouring of the throat not admitting of my employing a metallic agent in its representation, the figure in the accompanying Plate gives but a faint idea of the beauty of this fine species, which can only be appreciated by an examination of actual specimens.

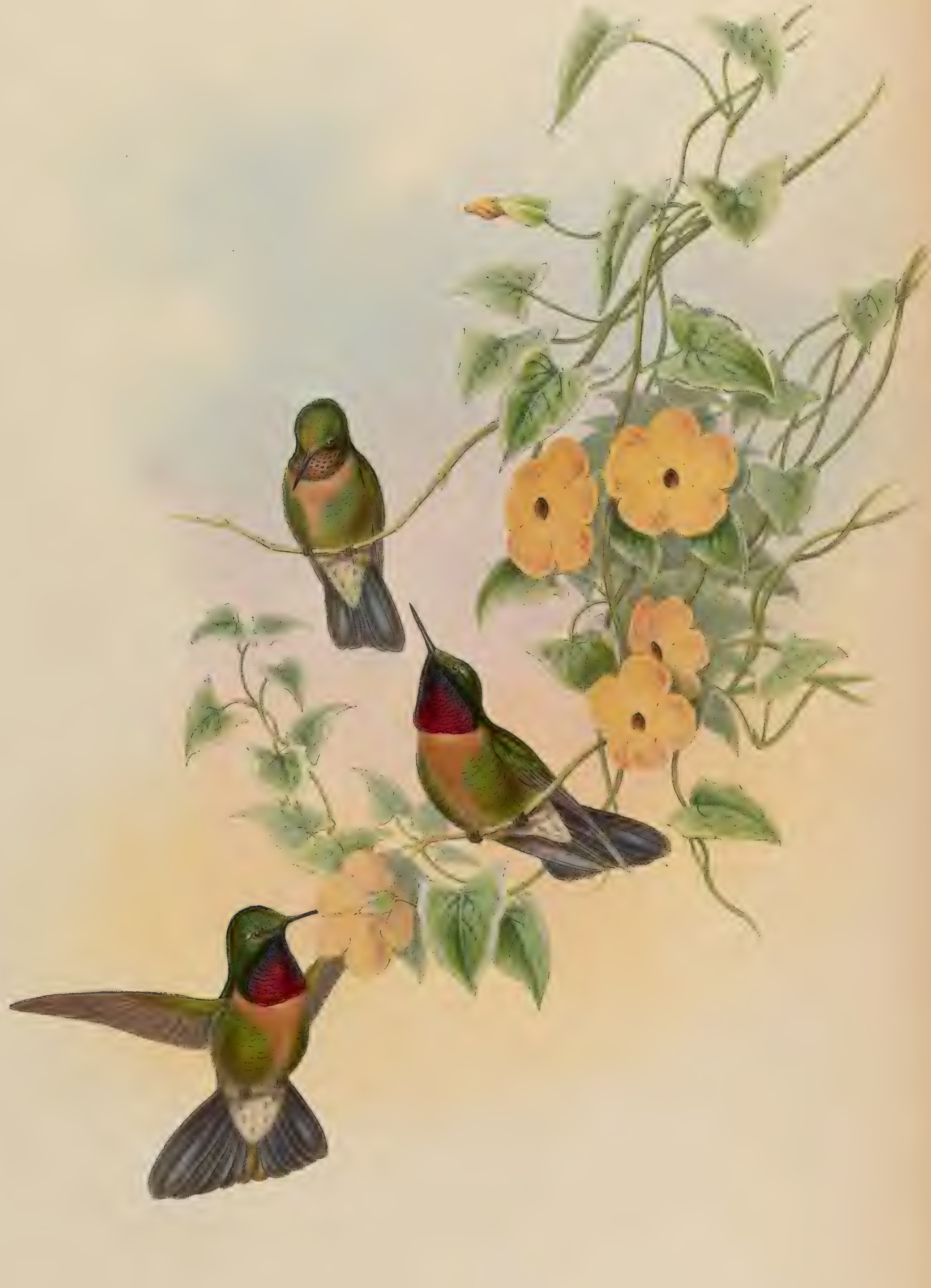
It gave me great pleasure when I found that M. Bourcier had named this species in honour of the father of British entomologists, and it is very gratifying to me to have this opportunity of assisting to perpetuate the name of a man so truly scientific and amiable as Mr. Spence.

The female of *H. Spencei* closely assimilates to the female of *H. Clarissæ*, but the throat-markings are more suffused with brown.

The male has a narrow mark of luminous silvery green on the forehead; all the upper and under surface golden green, with a tinge of brown on the head and rump; throat violaceous red, bounded below by a gorget of white, next to which are a few luminous green feathers; lores and sides of the neck black; wings purplish brown; two centre tail-feathers bronzy green; the lateral feathers bronzy brown, tipped with brownish grey; under tail-coverts brown, fringed with grey; bill black; feet brown.

The female is similar to the male, but is less brilliant, and has the throat mottled with brown and black.

The figures are of the natural size.



HELIANGELUS AMETHYSTICOLLIS.

J Gould and H.C Richter, del et lith.

Hullmandel & Walton, Imp

HELIANGELUS AMETHYSTICOLLIS.

Amethystine Sun Angel.

Orthorhynchus amethysticollis, D'Orb. et LaFres. Syn. Av., p. 31.—D'Orb. Voy. dans l'Amér. Mér., tom. iv. p. 576, tom. viii. pl. 60. fig. 2.
Mellisuga amethysticollis, Gray and Mitch. Gen. of Birds, vol. i. p. 112, *Mellisuga*, sp. 40.
Trochilus amethysticollis, Tschudi, Consp. Av., no. 207.
Lampornis amethysticollis, Tschudi, Faun. Per., p. 246.
Heliangelus amethysticollis, Bonap. Consp. Gen. Av., p. 76, *Heliangelus*, sp. 6.—Ib. Rev. et Mag. de Zool. 1854, p. 252.
Anactoria amethysticollis, Reichenb. Aufz. der Colibris, p. 12.

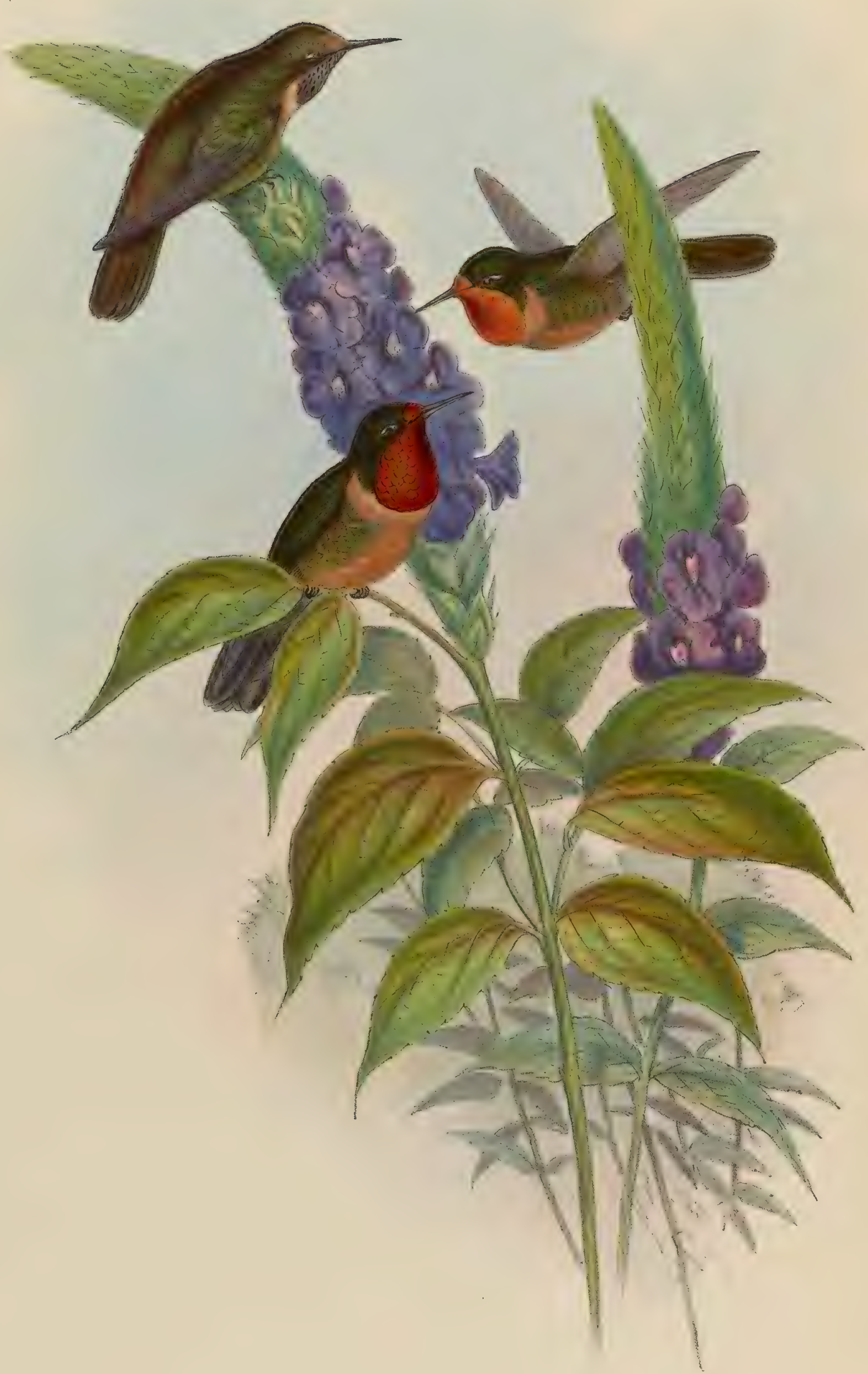
This beautiful Humming Bird was first made known to science by M. D'Orbigny, who procured a single example of it during his journey into Bolivia. It was subsequently found by Mr. Bridges in the same country, and it is from that source that the specimens in my own collection were obtained; I also received a single example from M. Warszewicz, who killed it in Northern Peru. Peru and Bolivia, then, evidently constitute the true habitat of this species, which may be regarded as the southern representative of the well-defined genus to which the appellation of *Heliangelus* has been given. In size and in the semi-rounded form of its tail it assimilates to *H. Clarissæ*; but it differs from that, as well as from every other member of the genus, in the buff colouring of its gorget, in the central line of the abdomen being buff, and in the under tail-coverts being of a darker hue; a marked difference from all its congeners is also presented in the greater size of the glittering green spot on the forehead, which, instead of being confined to the front, extends towards the crown. The female offers the usual difference in the colouring of the plumage, but preserves the buff band across the breast so characteristic of the male.

The specimen of this bird procured by M. D'Orbigny was obtained on the eastern slope of the Cordilleras in the country of the Yuracares near Cochabamba, at the upper limit of the woody vegetation. Its stomach contained numerous grubs and the larvæ of hemipterous insects.

The male has a large mark of luminous green on the forehead; chin black; throat rich luminous violet-red or puce colour, the blue or violaceous hue prevailing on the upper and lateral margins; below this a wide gorget of buff, succeeded by a series of green feathers, very narrow in the centre, broad on the sides, and blending with the bronzy green of the flanks; head, upper surface and wing-coverts bronzy green; the head, however, when viewed in front, appears black; lores and sides of the neck velvety black, separating the colours of the upper and under surface of the head and neck; immediately behind the eye a very small spot of buffy white; wings chocolate-brown; two central tail-feathers bronzy green; lateral tail-feathers dull black, the three outermost on each side tipped with brownish grey; abdomen mottled buff and bronzy green; under tail-coverts greyish white; bill black; feet brown.

The female has a faint indication of the luminous green on the forehead; head, upper surface and central tail-feathers bronzy green; lateral tail-feathers black; throat mottled buff and black; the buff gorget not so decided, and the luminous green feathers below far less conspicuous than in the male.

The figures are of the natural size.



HELIANGELUS MAVORS, *Gould*

J Gould and H C Richter, del et lith

Hullmandel & Walton, Imp

HELIANGELUS MAVORS, *Gould.*

Mars.

Heliangelus mavors, Gould in Proc. of Zool. Soc. 1848, p. 12, Aves, pl. ii.
Mellisuga mavors, Gray and Mitch. Gen. of Birds, vol. iii. App. p. 5, App. to p. 113.
Heliangelus mavors, Bonap. Consp. Gen. Av., p. 76, *Heliangelus*, sp. 3.—Ib. Rev. et Mag. de Zool. 1854, p. 252.
Trochilus Mavors, Reichenb. Aufz. der Colibris, p. 12.

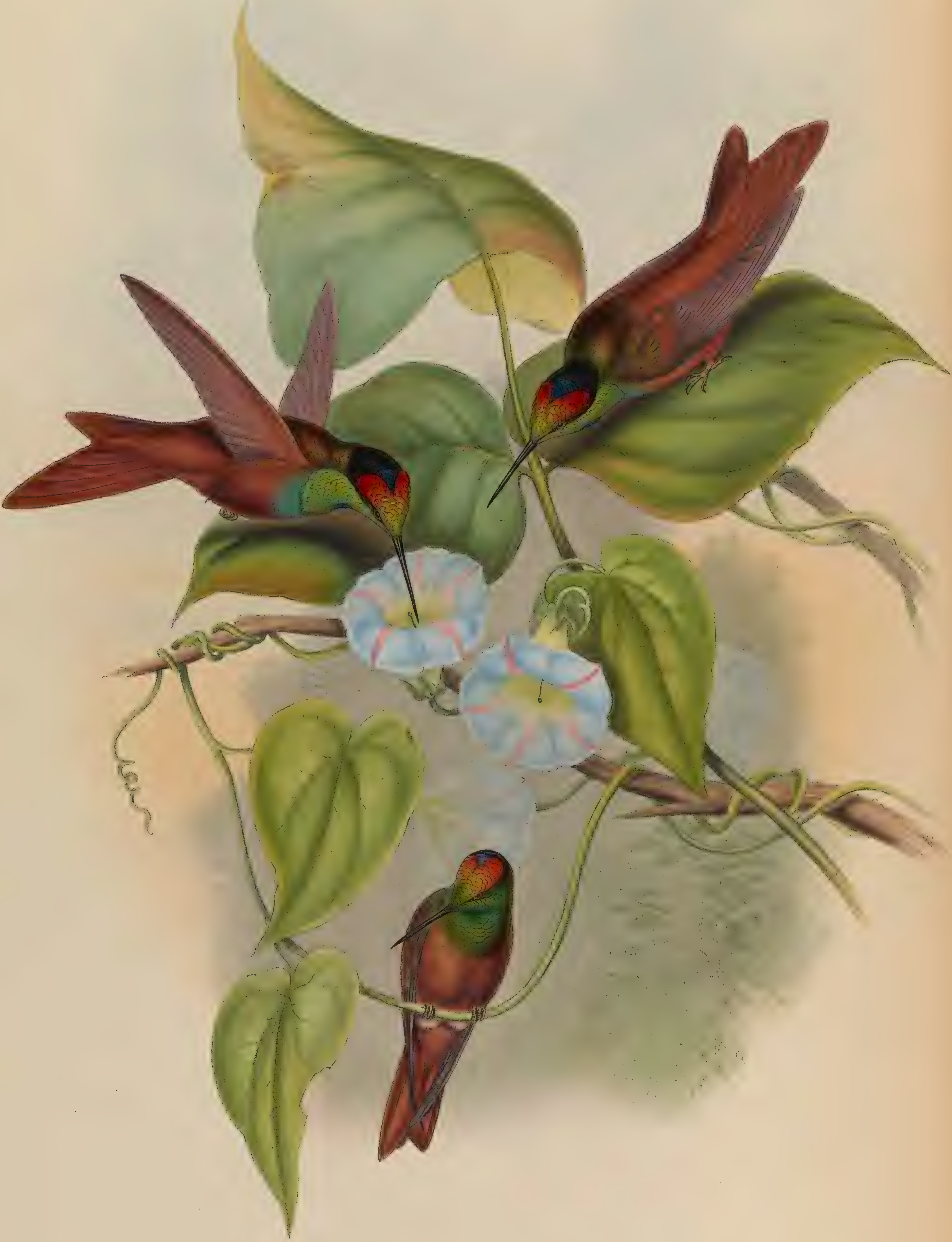
Of all the species of the Andean Humming Birds belonging to the genus *Heliangelus*, I regard this as by far the most beautiful and interesting; it has all the charms of novelty to recommend it; and it stands alone, too, among its congeners, no other member of the genus similarly coloured having been discovered up to the present time. The throat vies with the richest topaz, while the band on the forehead rivals in brilliancy the frontlet of every other species; the colouring of the throat, however, like that of *H. Spencei*, has not the transcendent glitter of *H. Clarissæ* and its near allies, consequently no metallic agent I could use would assist in truly representing the richness of its colouring: all that could be done has been; but I regret much when I observe how far inferior the representation is to the original.

The country in which this rare bird flies is the elevated region of Northern Columbia, particularly the flat Paramos of Portachuela and Zumbador, where Messrs. Funck and Schlim found it, at an elevation of from 7000 to 9000 feet; they also met with it on the Paramos of Los Conejos at a similar elevation. In those districts there doubtless exist other fine species at present unknown to us, for we can scarcely imagine that those travellers procured examples of all the species of the genus which dwell therein, and which we may reasonably expect to be as rich in the feathered tribes as it is in another department of Nature's wonderful works, Botany, in which, I am told, numerous were the discoveries they made in this almost *terra incognita*. Would that time and circumstances would admit of my visiting so rich a region, feeling assured, as I do, that my labours would be amply rewarded by discoveries, not only in this group of birds, but in every other branch of Zoology! Will not this remark induce some young and enthusiastic naturalist to make a journey thither for the purpose of investigating its productions? If the field be considered too limited, the eastern slope of the great Cordillera, and thence to Bolivia, will prove equally rich in beautiful objects; a lifetime, in fact, may be spent in thoroughly exploring this New-World paradise.

The male has a narrow mark of deep fiery red on the forehead; crown and all the upper surface bronzy green; behind the eye a very small spot of white; lores and sides of the neck black; throat deep fiery red, bounded below by a broad crescent of buff, which colour, but of a somewhat deeper tint, pervades the centre of the abdomen; flanks washed with green; under tail-coverts greyish buff; wings purplish brown; two middle tail-feathers bronzy green, the remainder bronzy brown, the two outer ones on each side obscurely tipped with white; bill blackish brown; tarsi dark brown.

The female is very similar to the male, but, in lieu of the fiery throat, has that part mottled with brown and black.

The figures are of the natural size. The plant is the *Stachytarpheta aristana*.



DIPHOGENA IRIS, *Gould.*

J Gould and H C Richter, del. et lith. *Hullmandel & [illegible]*

DIPHOGENA IRIS, *Gould.*

Rainbow.

Helianthea Iris, Gould in Proc. of Zool. Soc. 1853, p. 61; Reported in Athenæum April 16, 1853.

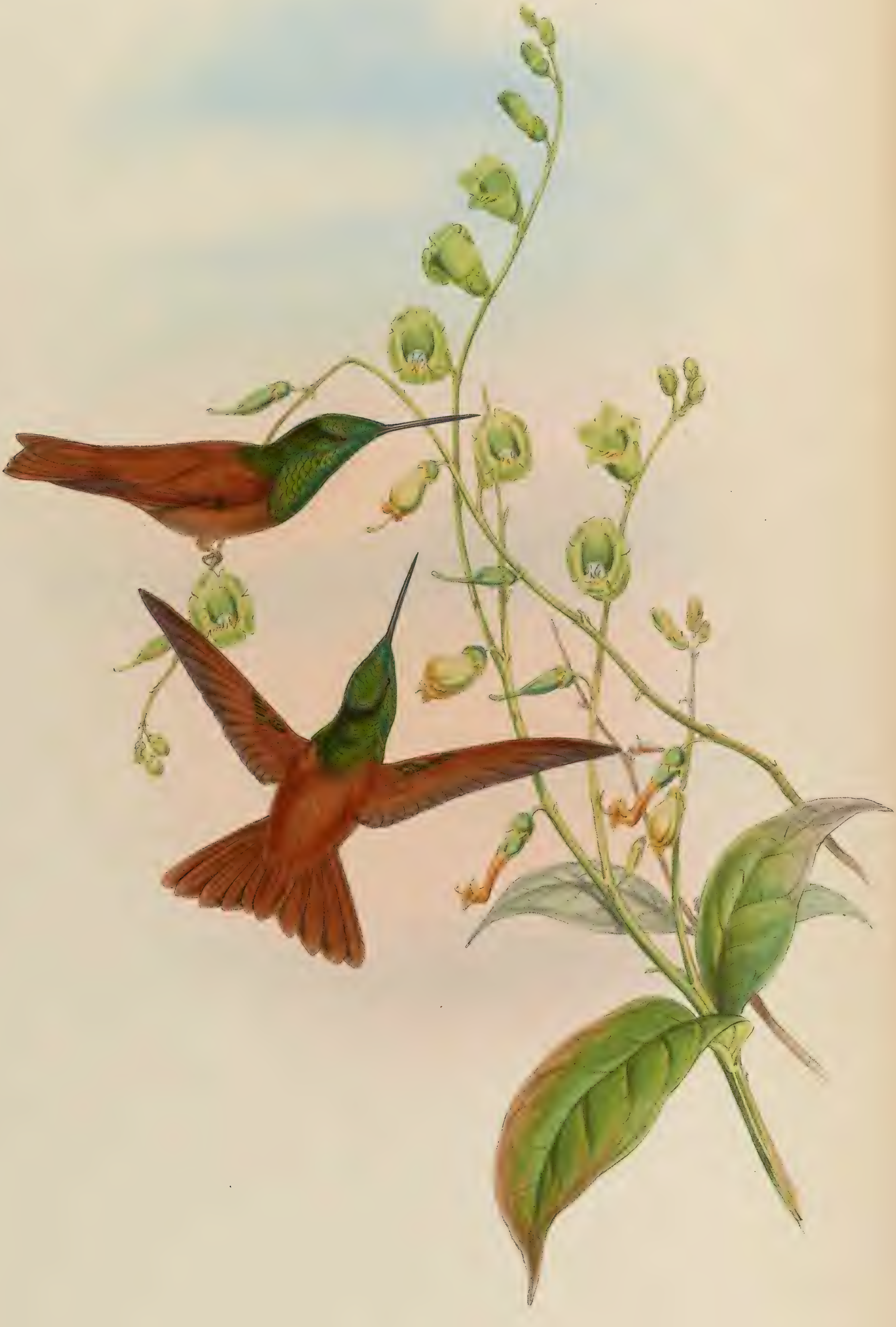
——— *iris*, Bonap. Consp. Troch. in Rev. et Mag. de Zool. 1854, p. 251.

During the last two years it has been my good fortune to obtain so many extraordinary species of Humming Birds from the hitherto almost untrodden parts of Peru, that I am quite at a loss for suitable expressions wherewith to describe their beauty, as will, I am sure, be apparent to my readers if they will take even the most transient glance at the Plates intended to represent this and some of the other species I have lately attempted to depict, among which no one is more brilliant than the *Diphogena Iris.* It is to the indefatigable perseverance of M. Warszewicz that we are indebted for our knowledge of this new bird, to which the name of *Iris* has been given, with the view of conveying some idea of the hues with which it is decorated; but beautiful as are the tints of the heavenly rainbow, they fall far short of the gorgeously brilliant colours of this bird's crest.

It will be seen that I have made the present bird the type of a new genus, to which future research in the rich provinces of Peru will doubtless add other species. The same means of information must also show whether the bird I have called *Aurora*, and another which at present I refrain from naming, are, or are not, the young males or females of the bird here represented, or if they be two other distinct species; my belief is that the latter will prove to be the case, but as yet I have not sufficient data to determine this point; I need scarcely say that I shall keep the subject in view, and communicate the information I may obtain as soon as received.

Feathers of the forehead and crown of the most resplendent brilliancy, those of the forehead green on the sides, glossed with gold in the centre; on the crown the feathers are divided into three portions, those on each side being rich orange-scarlet, and the centre equally rich blue; throat, neck and chest glittering grass-green, with a small gorget of purplish blue in the centre of the former; back of the neck velvety black; wing-coverts and spurious wing bronzy brown; wings purplish brown, the feathers nearest the body, lower part of the back, under surface, upper and under tail-coverts, and tail, chestnut-red.

The figures are of the natural size.



DIPHOGENA AURORA, *Gould.*

J Gould and H C Richter, del et lith *Walter & Cohn, Imp*

DIPHLOGÆNA AURORA, *Gould.*

Bolivian Rainbow.

Diphlogena Aurora, Gould in Proc. of Zool. Soc., part xxi. p. 61.
Hypochrysia Aurora, Reichenb. Aufz. der Col., p. 9.
Coeligena Warszewizii, Reichenb. Aufz. der Col., p. 23.
Coeligena Warszewiczii, Reichenb. Troch. Enum., p. 4, pl. 690. fig. 4526.

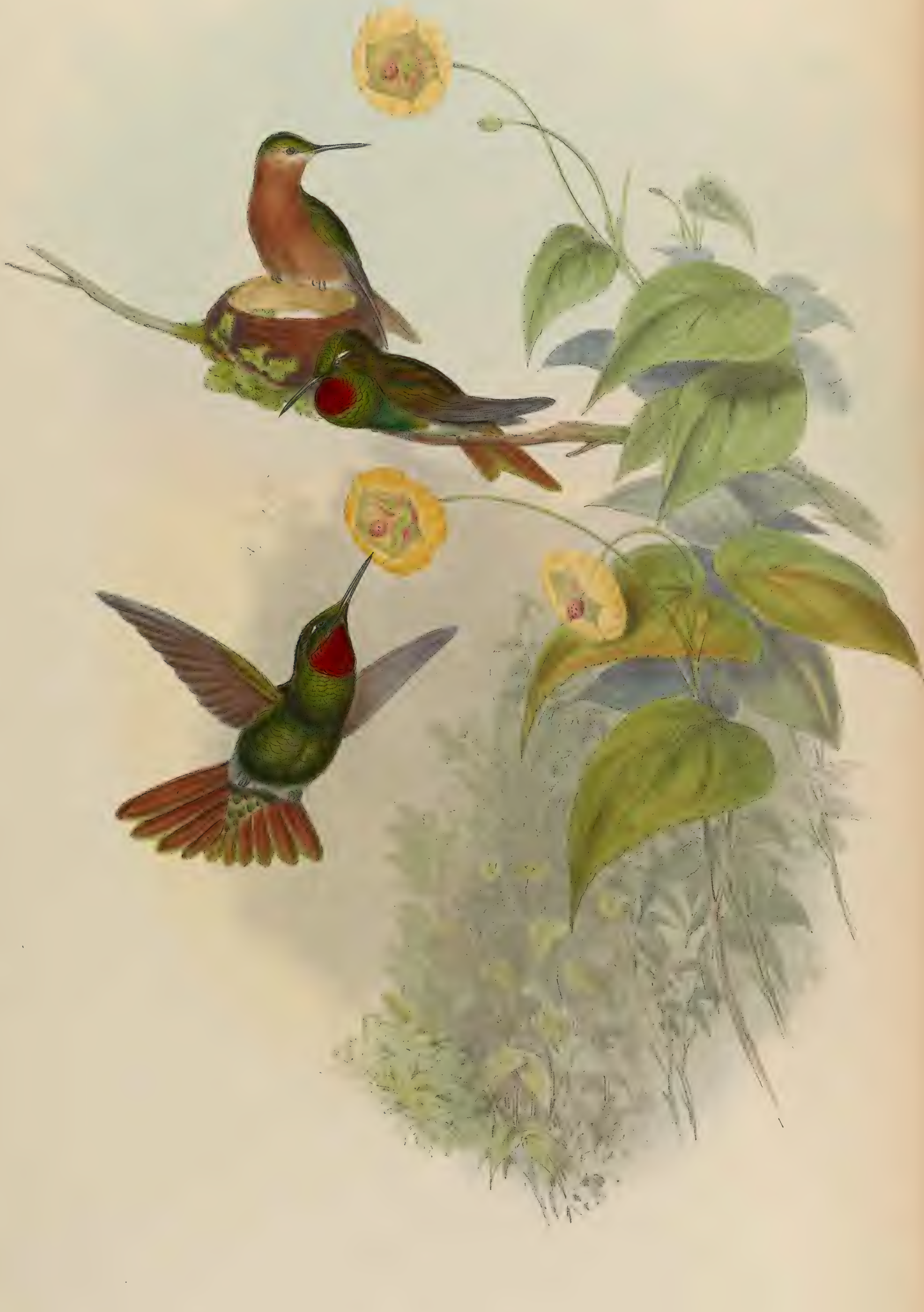
The beautiful bird to which I have given the name of *Diphlogæna Iris,* and the one represented in the accompanying plate, were both collected by M. Warszewicz; and two finer or more interesting species are scarcely to be found among the *Trochilidæ.* It is very unfortunate that the traveller, of whose intrepidity I have so often had occasion to speak, did not ascertain the sexes of these birds by dissection; had this been done, the doubt which has arisen in my mind as to whether this may be a distinct species, or merely a female of *D. Iris,* would have been dispelled; as it is, the point must remain to be decided by future research. Since my original description was published in the 'Proceedings of the Zoological Society' for 1853, I have examined the collection of birds contained in the Museum at Dresden, and thereby ascertained that the bird to which Dr. Reichenbach has given the specific name of *Warszewiczii* is precisely identical with my *D. Aurora.* It is a question which name has the priority; but I believe that mine was first given; for I know that all the Humming-Birds collected by M. Warszewicz were sent direct to George Ure Skinner, Esq., and by him at once handed over to me, and those that were new were immediately described; a few, and only a few, were retained by M. Warszewicz, and afterwards sent to Berlin, whence some of them found their way to Dresden.

It is now pretty certain that both these fine birds were collected in the Andes of La Paz, in Bolivia, and not in Peru, as stated in my account of *D. Iris.*

The following is a copy of my description of this bird, read at the scientific meeting of the Zoological Society, held in the evening of the 12th of April, 1853.

"The whole of the crown rich metallic green; throat and back of the neck also metallic green, but not so lustrous as on the crown; body and tail chestnut red, as in *D. Iris,* but not of so deep a hue."

The figures are of the natural size. The plant is the *Lisianthus acutangulus.*



CLYTOLÆMA RUBINEA.

J Gould and H C Richter, del et lith

Hullmandel & Walton, imp

CLYTOLÆMA RUBINEA.

Brazilian Ruby.

Mellisuga Brasiliensis gutture rubro, Briss. Orn., tom. iii. p. 720. pl. 37. fig. 4.

Oiseau mouche à rouge, Buff. Pl. Enl. 276. fig. 4.

Le Rubis Emeraude, Buff. Hist. des Ois., tom. vi. p. 31.—Vieill. Ois. dor., tom. i. p. 114.

Le Grand Rubis, Vieill. Ois. dor., tom. i. p. 60. pl. 27.

Trochilus rubineus, Lath. Ind. Orn., tom. i. p. 312.—Vieill. Ency. Méth. Orn., part ii. p. 563.

Ornismya rubinea, Less. Hist. Nat. des Ois. Mou., p. 146. pls. 44, 45, 46.—Ib. Traité d'Orn., p. 278.

Mellisuga rubinea, Gray and Mitch. Gen. of Birds, vol. i. p. 112, *Mellisuga*, sp. 22.

Heliomaster rubineus, Bonap. Consp. Gen. Av., p. 70, *Heliomaster*, sp. 4.

Ruby-throated Humming-bird, Lath. Gen. Syn., tom. ii. p. 768.—Shaw, Gen. Zool., vol. viii. pp. 340, 341.—Lath. Gen. Hist., vol. iv. p. 342.

L'oiseau-mouche brun-gris, Vieill. Ois. dor., tom. i. p. 61. pl. 28?

I do not recollect that I have ever received examples of this bird from any other country than Southern Brazil, which I am therefore led to believe is its true habitat; it is one of the species most abundantly sent to Europe in all collections transmitted from Rio de Janeiro, and one of those most commonly called into requisition for the fabrication of the beautiful artificial feather flowers made by the nuns in the convents of that country. That it undergoes a partial migration is shown by the remarks respecting it communicated to me by Mr. Reeves, in which he states that it arrives in the neighbourhood of Rio de Janeiro in May, and retires again to the virgin forests or other unexplored parts of the country about the end of September. For some time after its arrival it frequents the flowers of the Yuga, "Tamarinda de Serra;" in July, August and September, it resorts to the flowers of the Gua-chimba, and lastly, procures its food from those of the Mariana, a plant which seldom remains in bloom for more than fourteen days. It breeds during the months of June, July and August, the nest being placed among the branches of the loftiest trees of the forest. Thousands are killed every year for the fabrication of artificial flowers.

The circumstance of this species being so very abundant near Rio during the months above mentioned, has enabled Mr. Reeves to ascertain with certainty that it is subject to very great variation in the colouring of the plumage between youth and maturity, and moreover that the adult female is fully as brilliant as the male. I consider this a very important piece of information, as we may reasonably suppose that some other species undergo similar changes; and it tends to confirm an opinion I have long entertained, that very old females of other species are as brilliantly coloured as the males; I do not, however, believe that this state must be attained before the powers of reproduction are perfected, for I have no doubt that the brown birds so constantly sent with the males have been capable of breeding. Mr. Reeves adds, that "in the places much frequented by this species examples may be seen during the same month in every state of plumage they assume while in existence; and these changes are so numerous that I have in my Collection upwards of thirty specimens, no two of which are precisely alike."

To give figures or minute descriptions of all these changes would not add to the value or the interest of the present work; they will be sufficiently illustrated by the accompanying figures of the two extremes.

Besides being one of the commonest birds in our collections, the *Clytolæma rubinea* is also one of the most beautiful members of its lovely family, and is rendered eminently conspicuous in the group by its rich ruby-coloured throat, surrounded with equally glittering green.

Mr. Reeves informs me that its local name is "Papa de Fogo," and that the old bird utters a loud cry resembling the syllables *Tirr-tirr-tirr*, the cry of the young bird being the same, but fainter and uttered more slowly.

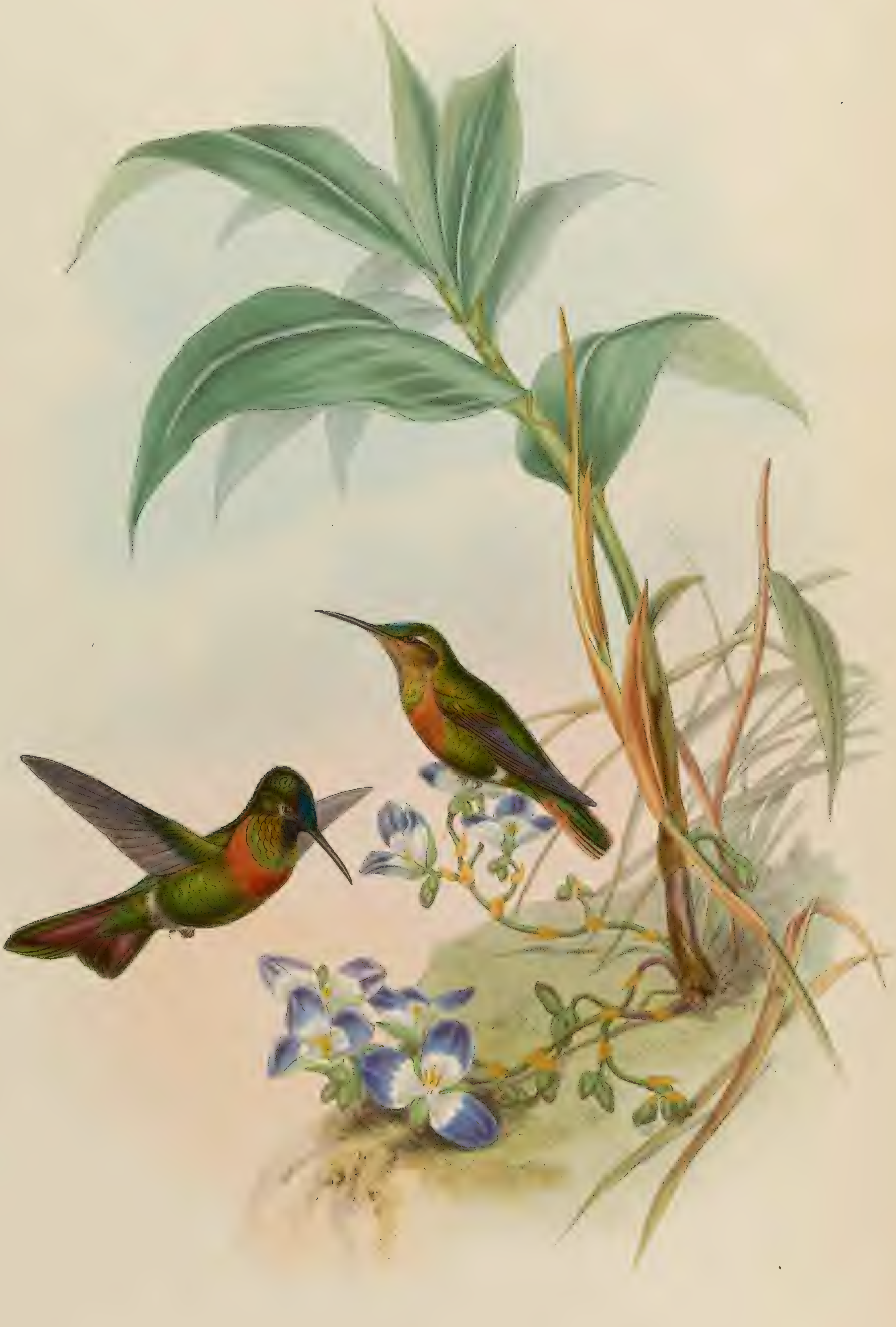
The nest sent to me by this gentleman is of a round, cup-shaped, but shallow form, placed horizontally on the tri-forked extremity of a small branch, composed of fine, dark brown, glossy, hair-like materials closely woven together, and decorated with small pieces of buff-coloured lichen, and lined with the pale buff flossy seed crowns of *Asclepiadeæ*, within which is another lining of a pale rufous wool-like substance, upon which the two white eggs are deposited: they are half an inch in length and three-eighths of an inch in width.

Forehead rich luminons metallic green, proceeding backwards to a point on the centre of the crown; throat rich luminous puce-red, surrounded by a broad pectoral crescent of rich luminous metallic green; sides of the crown and occiput greenish bronze, passing into the golden rufous of the back, wing- and tail-coverts; wings rich purple-brown; the bases of the secondaries rufous, showing conspicuously on their under surface; tail rich golden brown, slightly edged with dark brown, and tipped with bronzy green; abdomen and flanks dull green, each feather slightly luminous at the tip; a bar of downy white feathers across the vent; under tail-coverts green, edged with rufous; bill black; feet fleshy brown.

In the young male or the female the head and upper surface is green; the lateral tail-feather on each side is rufous; the three next are rufous down the central portion of their bases, with bronzy margins and apices; and the two central ones are wholly bronze; the throat and breast are rufous, and the flanks green.

In the subsequent stages the rich gorget and the full hues of maturity are gradually assumed.

The figures are of the natural size.



CLYTOLÆMA? AURESCENS, *Gould*

J. Gould and H. C. Richter del. et lith.

Hullmandel & Wa

CLYTOLÆMA? AURESCENS, *Gould.*

Banded Ruby.

Trochilus (*Lampornis*) *aurescens,* Gould in Proc. of Zool. Soc., part xiv. p. 88.
Polytmus aurescens, Gray and Mitch. Gen. of Birds, vol. i. p. 108, *Polytmus,* sp. 23.
Lampornis aurescens, Bonap. Consp. Gen. Av., tom. i. p. 72, *Lampornis,* sp. 12.
Margarochrysis aurescens, Reich. Auf. der Col., p. 11.—Ib. Troch. Enum., p. 8.
Campylopterus aurescens, Bonap. Rev. et Mag. de Zool. 1854, p. 250.

There is a region in South America that has as yet been but superficially investigated, either by the persevering and forward-pressing collector, the scrutinizing man of science, or those pioneers of discovery, the devotees of religion. This country, vast in extent, covered with great primæval forests, and watered by hundreds of the tributary streams which serve to form the great rivers of the inner sides of Columbia, Peru, and Bolivia, teems with animal life: by the inner side, I mean the eastern dip of the great Andean and Cordilleran ranges, or, to speak more pointedly, the sources and tributaries of the rivers Amazon, Madeira, and Negro. In this vast region, extending for at least six degrees of latitude on each side of the equator, there must be numerous species which are still unknown to us; for at present we have only skirted some of its forests, and ascended or descended, as the case may be, a few of its principal rivers. The part of America here alluded to is, if I mistake not, the native country of the beautiful bird figured on the accompanying Plate; at least it is from thence that most of the specimens I have seen have been procured. My late friend, John Natterer of Vienna, obtained, I believe, several examples on the banks of the Madeira; and Mr. Bates sent females or young males from the neighbourhood of Ega; I have also a specimen sent from Ecuador by Mr. Fraser, but said to have been obtained on the Napo.

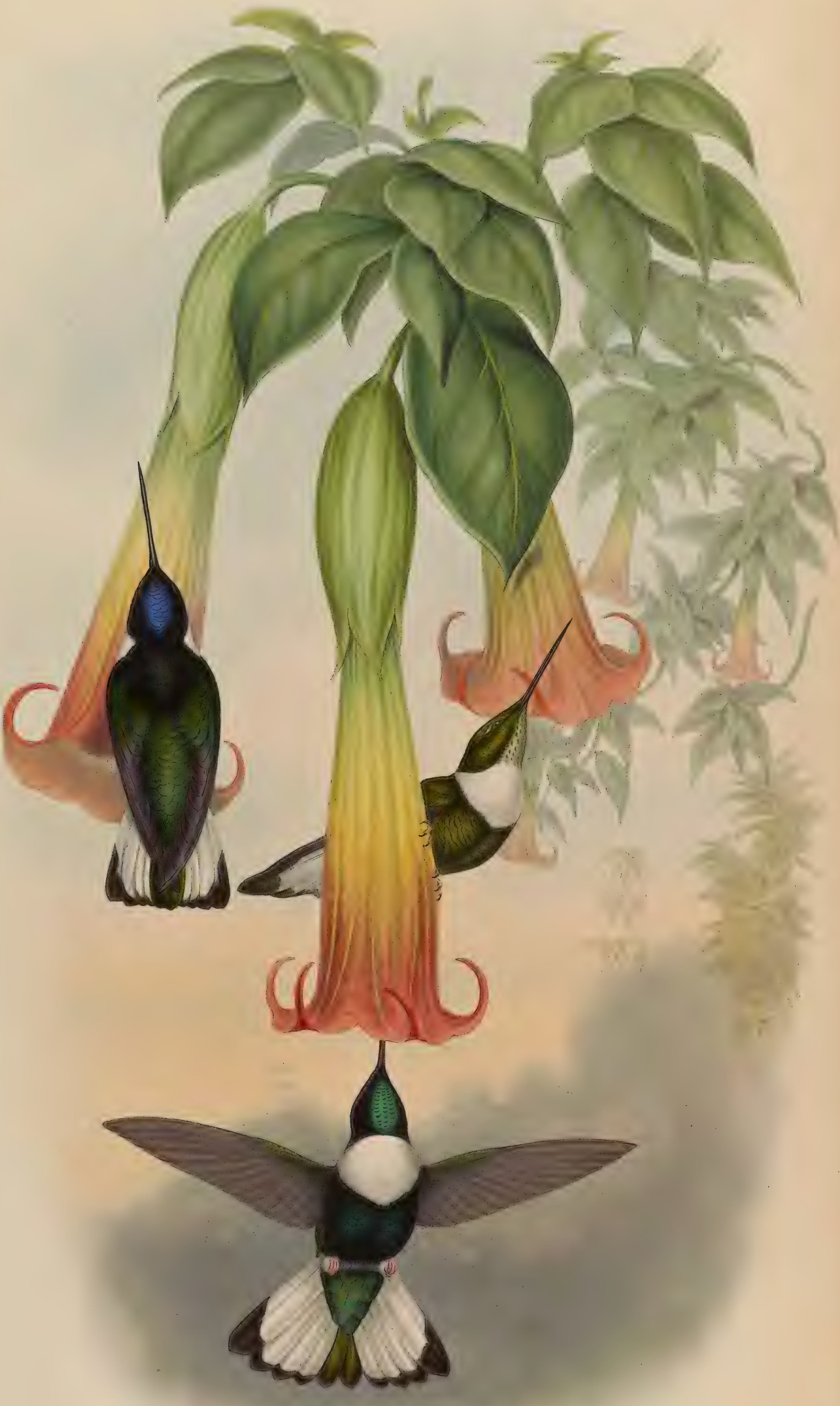
In point of affinity, the *Clytolæma aurescens* is more nearly allied to the *C. rubinea* than to any other species; still it differs somewhat both in form and colouring, sufficiently, perhaps, to warrant its being made the type of a new genus; and, if so, one has already been proposed for it, as will be seen on reference to the synonyms, which are getting pretty numerous as to generic appellations; I trust, however, that, as I had the pleasure of naming the bird in the first instance, it may be allowed, after nearly twenty years, to remain in the genus in which I have now placed it.

The male has the chin black; the throat rich luminous gold-colour; across the chest a broad band of deep rufous; on the forehead a longitudinal stripe of rich shining blue; all the upper surface, two central tail-feathers, upper and under wing-coverts and abdomen bronzy green; wings purplish brown; lateral tail-feathers chestnut-brown, tipped both above and beneath with a bronzy lustre; under tail-coverts deep fawn-colour; bill black.

The female or young male of the year differs in having the chin greenish brown, and in the absence of the longitudinal blue stripe on the crown; the outer feather of the tail chestnut, the three next chestnut with a narrow edging of bronze along their outer margins.

This latter description probably applies to a young male; if so, the female is unknown.

The figures are of the natural size. The plant is the *Dichorisandra leucophthalmos.*



BOURCIERIA TORQUATA.

J. Gould and H. C. Richter, del. et lith.

Hullmandel & Walton, Imp.

BOURCIERIA TORQUATA.

Collared Inca.

Ornismia torquata, Boiss. Rev. Zool. 1840, p. 6.
Mellisuga torquata, Gray and Mitch. Gen. of Birds, vol. i. p. 112, *Mellisuga*, sp. 12.
Bourcieria torquatus, Bonap. Consp. Gen. Av., p. 73, *Bourcieria*, sp. 2.
——— *torquata*, Bonap. Consp. Troch. in Rev. et Mag. de Zool. 1854, p. 251.

The present is one of the best-known species of the well-defined Andean genus of Humming Birds, to which the Prince Charles Lucien Bonaparte has given the appellation of *Bourcieria*, in order to assist in perpetuating the name of a gentleman familiar to every naturalist, as the possessor of one of the finest collections of the *Trochilidæ* in Europe, and who, by his personal researches in South America, has added largely to our knowledge of this charming group.

Speaking in a wide sense, the high lands of the great country of Columbia is the native habitat of this fine species. Most of the collections from Bogota and Popayan contain examples. Mr. Mark tells me that it frequents the *Paramos* or upland grassy districts, and that it extracts its food from the blossoms of the shrubby plants common to such localities, the wild Guava being always resorted to when in flower.

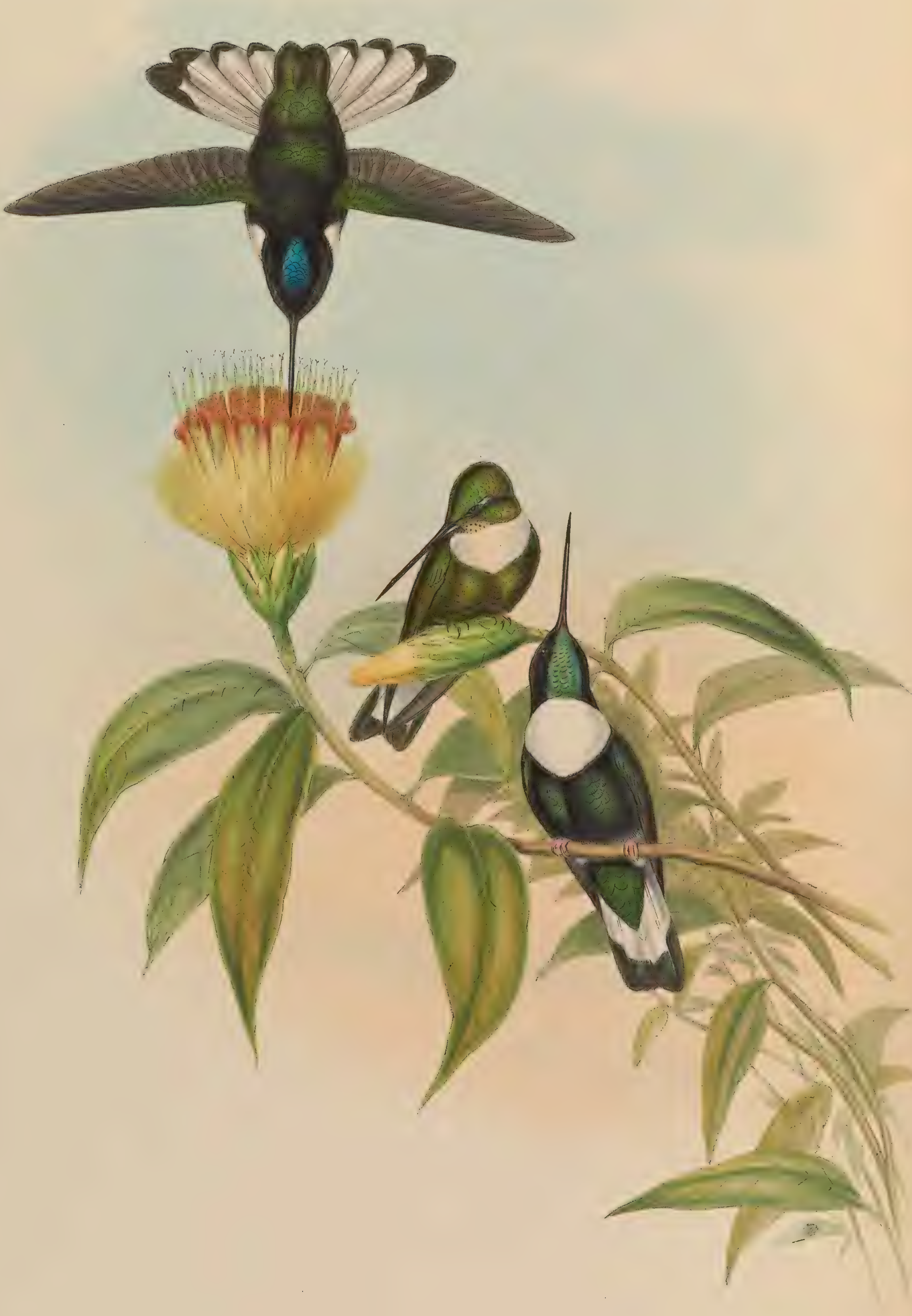
Judging from the large size of its wings and its general contour, we may conclude that, like its allies, its powers of flight are very great.

It will be seen that the colours of the male are very decided, the white breast of the fully adult birds offering a striking contrast to the jet-black of the surrounding plumage. The female is much smaller than the male, and although dressed in a somewhat similar style of plumage, the markings are never so well defined, the blue crown is absent, the white gorget is less pure, and the surrounding plumage obscure green instead of black.

The male has the forehead, back of the neck, mantle, ear-coverts, and sides of the face, black with green reflexions; on the centre of the crown a nearly triangular mark of blue; shoulders, spurious wing, the three innermost secondaries, back and upper tail-coverts deep grass-green; chin and throat black, each feather tipped with greenish blue; on the breast a broad gorget of pure white; abdomen black, with reflexions of green on the tips of the feathers; thighs black; tarsi white; toes yellowish rose-colour; wings purplish brown; two centre tail-feathers dark olive-green, the remainder pure white tipped with dark olive-green, and extending down the external margin of the outer feather for three-fourths of its length; bill black.

The female has the head and upper surface bronzy grass-green; no blue on the crown; wings and tail as in the male; the throat white speckled with green, and the white gorget dull and clouded.

The figures are of the natural size; the plant is a species of *Brugmansia*, common in the country frequented by the birds.



BOURCIERIA FULGIDIGULA, *Gould.*

J. Gould and H. C. Richter, del. et lith. *Hullmandel & Walton, Imp.*

BOURCIERIA FULGIDIGULA, *Gould.*

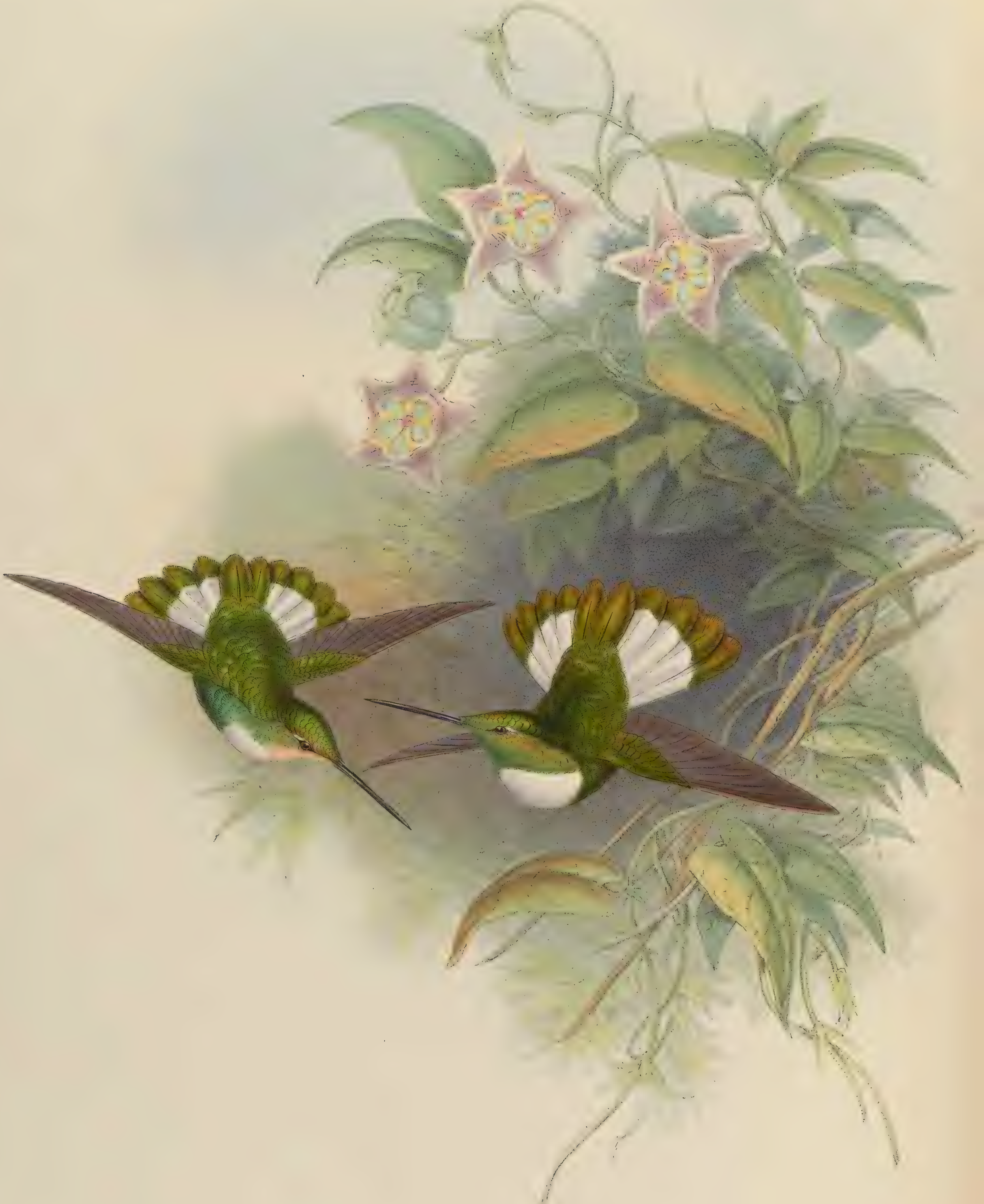
Green-Throated Inca.

The Loddigesian Collection at Hackney has for many years been graced with specimens of this Humming Bird, collected in Peru, and M. Bourcier obtained numerous examples in Ecuador, some of which are now in my own collection. This gentleman and myself have hitherto considered the *Trochilus insectivorus* of Dr. Tschudi and the present bird to be identical, but having been permitted by the authorities of the Museum at Neufchatel to bring the original of Dr. Tschudi's description to London, for the purpose of comparison, I now believe the two birds to be quite distinct; I have therefore given the present species a distinctive appellation, namely, that of *fulgidigula*, with reference to its glittering green throat. It is very nearly allied to *Bourcieria torquata*, but differs in having the spot on the crown green instead of blue, and in the richer hue and greater amount of green on the throat. Its native country is evidently the northern parts of the Peruvian Andes, including Ecuador.

The sexes present the same differences that are observable in *Bourcieria torquata*, and the females of the two species are so nearly alike, that the one can scarcely be distinguished from the other.

The male has the forehead, nape, upper part of the back, face and ear-coverts black with green reflexions; in the centre of the crown a nearly triangular mark of metallic green; shoulders, spurious wing, three inner secondaries, back and upper tail-coverts deep green; chin and throat beautifully spangled with green; a large gorget of pure white across the breast; abdomen black with green reflexions on the tips of the feathers; thighs black; tarsi white; toes yellowish rose-colour; wings purplish brown; two central tail-feathers dark olive-green; the remainder pure white tipped with dark olive-green, which colour also extends down the external margin of the outer feather for three parts of its length.

The Plate represents two males and a female of the natural size, on a species of *Stifftia.*



BOURCIERIA CONRADI.

J. Gould and H. C. Richter, del et lith

Hullmandel & Walton, Imp

BOURCIERIA CONRADI.

Conrad's Inca.

Trochilus Conradii, Bourc. in Proc. of Zool. Soc., part xv. p. 45.
Mellisuga Conradii, Gray and Mitch. Gen. of Birds, vol. i. p. 112, *Mellisuga,* sp. 14.
Conradinia Conradi, Reich. Auf. der Col., p. 10.
Bourcieria conradi, Bonap. Consp. Gen. Av., p. 73, *Bourcieria,* sp. 3.—Ib. Rev. Zool. 1854, p. 252.

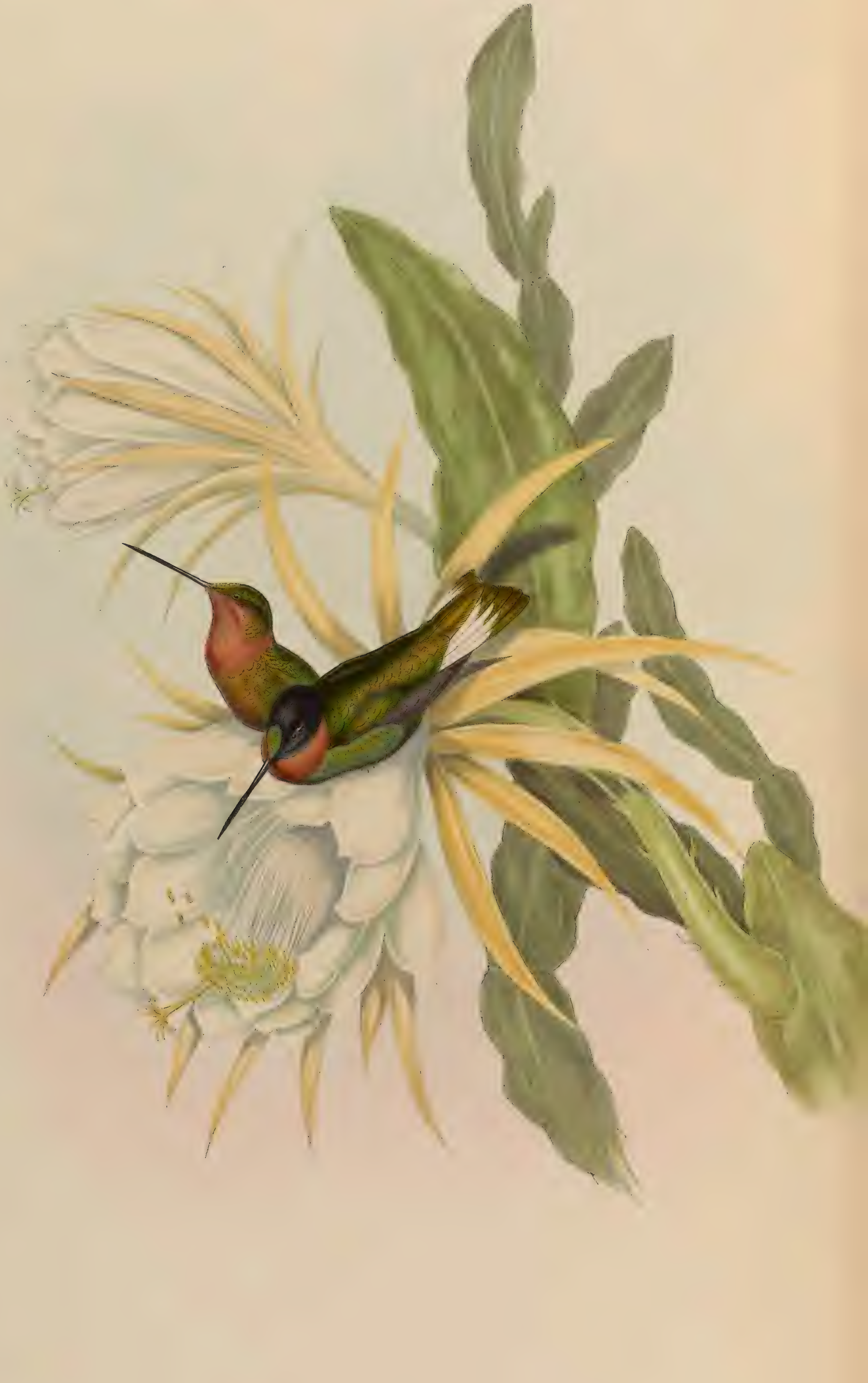
It is after the son of the late George Loddiges that this splendid and very rare species has been named,—a just and graceful tribute to the descendant of one, who it may be truly said loved this group of birds; and I am sure that Mr. Conrad Loddiges duly estimates the compliment paid him by M. Bourcier in giving his name to so charming a bird.

In point of affinity, this species is intimately allied both to the *Bourcieria torquata* and *B. fulgidigula,* but differs from both not only in the lighter hue of the green colour pervading the upper and under surface, but in the total absence of blue on the crown, that part being resplendent green in *B. Conradi.* The native country of this fine bird is stated by M. Bourcier to be the " environs of Caraccas;" but my specimens were, I believe, procured by M. Linden near Pamplona, in New Granada. Like the other typical species of the genus, the sexes differ considerably in the colouring of their plumage; the female having the throat white, and being destitute of the glittering green on the crown. Judging from the appearance of the dried skins, it would seem that the legs in the living state are yellow.

The male has the head shining green, the remainder of the upper surface, wing-coverts, throat, sides of the neck, abdomen and flanks green, with golden reflexions; across the chest a broad mark of white; wings purplish brown; two central tail-feathers bronzy green, the remainder white, largely tipped with bronzy green; vent grey; under tail-coverts green; thighs white; beak black; feet apparently yellow.

The female is similar, but is less brilliant, and has the throat as well as the breast white or buffy white.

The figures are of the natural size.



BOURCIERIA INCA, *Gould.*

J Gould and H C Richter, del. et lith

Hullmandel & Walton, Imp

BOURCIERIA INCA, *Gould.*

Inca.

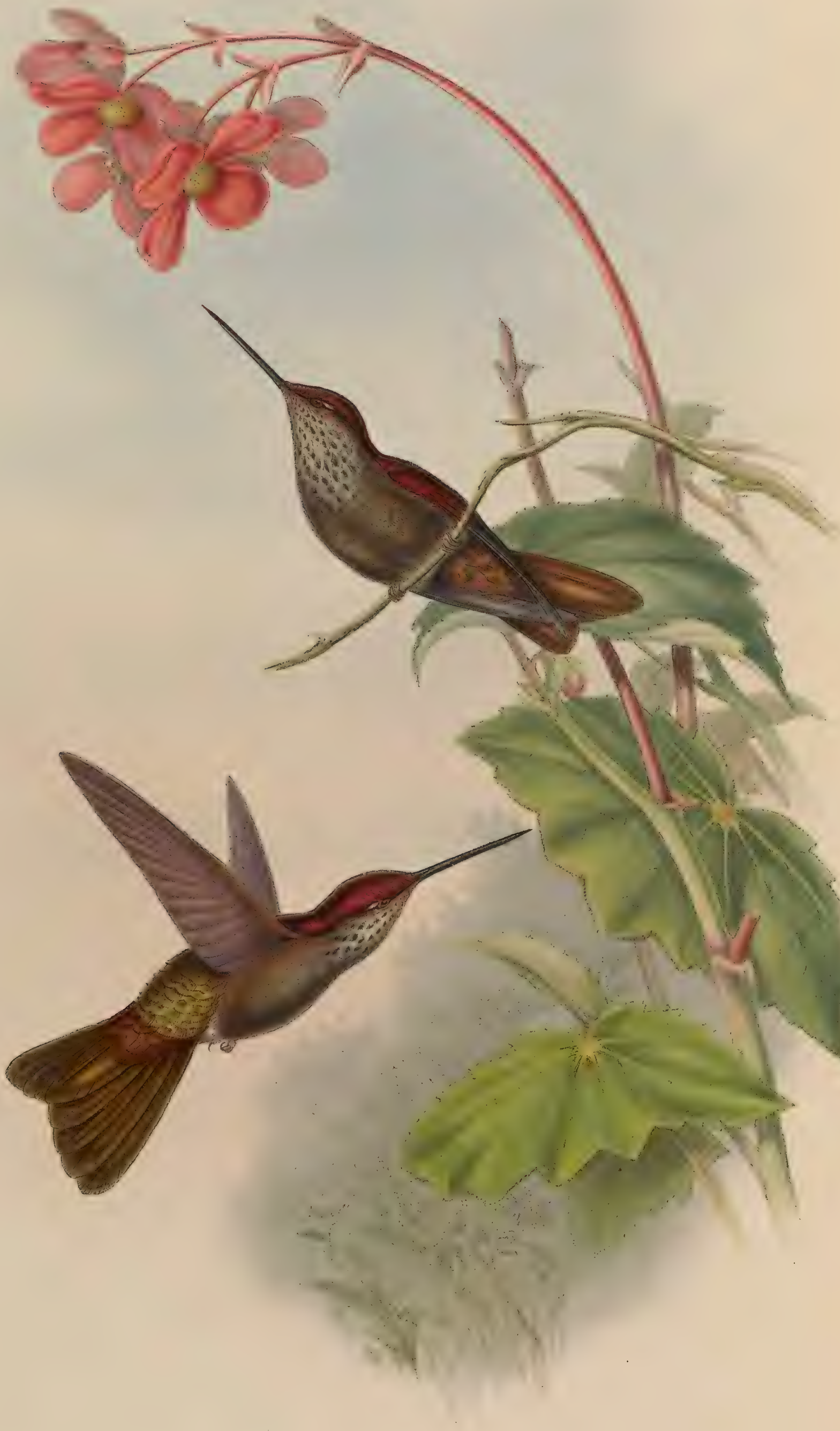
Bourcieria Inca, Gould in Jard. Cont. to Orn. 1852, p. 136.
———— *inca,* Bonap. Consp. Troch. in Rev. et Mag. de Zool. 1854, p. 252.

We are indebted to M. Warszewicz for the discovery of this very charming species, examples of both sexes of which grace my collection. They were obtained during the month of July in the province of Coroico in Bolivia, while hovering over a species of *Bejaria,* at an altitude of from six to eight thousand feet. The first example I received was a young male, of which I gave a description in Sir William Jardine's "Contributions to Ornithology" for 1852, accompanied by the remark, that, "whenever the adult becomes known, it will doubtless prove to be one of the finest species of the *Trochilidæ* yet discovered." In the interval which has since elapsed, an adult example of each sex has been obtained, and I am therefore enabled to attempt their delineation; and an attempt is all it can be called, for it is utterly impossible to give a correct representation of this glittering gem on paper. It is by far the finest species of the genus to which I have assigned it, and affords additional evidence of the extraordinary richness of the natural productions of the Peruvian and Bolivian forests. Like the other members of the genus, it frequents moderately high lands where an almost equable temperature prevails.

The male has the crown of the head, back of the neck, sides of the face and throat jet-black, relieved by a spot of glittering green on the forehead; the tips of the feathers on the throat are also fringed with the same, but less brilliant, hue; across the throat a crescent of rich cinnamon-red extending upwards on to the sides of the neck; all the upper and under surfaces beautiful green, assuming a metallic lustre on the breast and flanks; upper tail-coverts and two central tail-feathers green with bronzy reflexions; lateral tail-feathers white tipped with bronzy green, which colours extend down the margin of the outer ones for three-fourths of their length; under tail-coverts green; wings purplish brown; feathers of the thighs and tarsi white; bill black; feet yellow or flesh-colour.

The female has the crown of the head and back of the neck green, clouded with black; back, upper tail-coverts, shoulders and flanks vivid bronzy green; throat, cheeks and gorget-like band on the breast cinnamon-red, clouded on the throat with brown, and spangled with green on the cheeks; thighs buffy white; wings and tail as in the male.

The figures represent both sexes of the size of life.



CŒLIGENA TYPICA.

J Gould and H C Richter del et lith

Hullmandel & Walton Imp

CŒLIGENA TYPICA.

Cœligene.

Ornismya Cœligena, Less. Les Troch., p. 141. pl. 53.—Jard. Nat. Lib. Humming Birds, vol. ii. p. 53. pl. 4.

Mellisuga cœligena, Gray and Mitch. Gen. of Birds, vol. i. p. 112, *Mellisuga,* sp. 15.

Caeligena typica, Bonap. Consp. Gen. Av., p. 73, *Caeligena,* sp. 1.

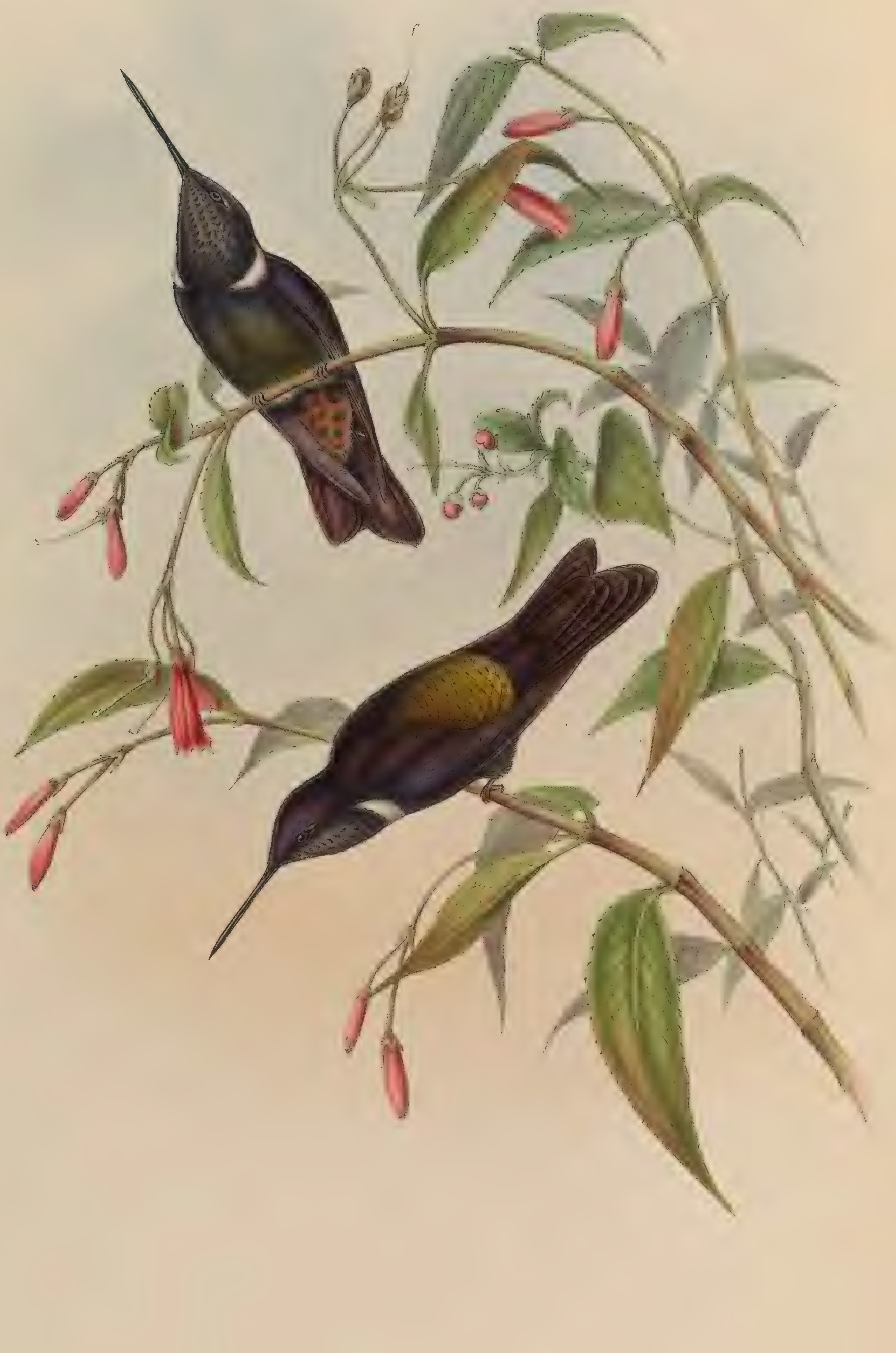
Cœligena typica, Bonap. Consp. Troch. in Rev. et Mag. de Zool. 1854, p. 252.

Were not the numerous specimens of this bird, which we have of late years received, all perfectly alike, we might naturally suppose that they were birds clothed in an immature dress, or females of some species the males of which were not known; all the bright colour which occurs being on the lower part of the back, and consisting of a metallic lustre on the edges of the rump-feathers, which is only visible in certain lights; late discoveries, however, have made us acquainted with other species of this form, in which a similar style of plumage prevails, and we now find that there is a large group of these plainly-coloured birds, to which, therefore, a distinctive generic title has with propriety been given; all inhabit the great Andean ranges, and one or other of the species is found from the Isthmus of Panama to Bolivia. It is not, however, on the bleak Sierras that these birds must be sought for, but on the first Steppes of the Andes, above the great plains which stretch away to the eastward. I have always considered the Bolivian bird to be different from the one here figured, and if this opinion be correct, the range of the latter will be more limited than it at present appears to be. I have seen specimens from Ecuador, Popayan, Quito, Quijos, Bogota, and the Caraccas, beyond which, in all probability, its range does not extend. Mr. Mark informs me that the Bogota specimens are collected in the hot districts of Gramalote, which lie to the eastward of that city, at an elevation of from one to two thousand feet.

I believe that there is little or no difference in the colouring of the sexes, and that the female can only be distinguished by her smaller size.

The head, neck, back and wing-coverts are bronzy crimson-brown, becoming brighter bronze on the lower part of the back and rump, the feathers of which parts are fringed with metallic grass-green, the brilliancy of which is most conspicuous when viewed from behind; wings purplish brown; upper tail-coverts rich reddish bronze; tail bronzy green; feathers of the throat grey with brown centres, giving that part a scaly appearance; flanks and abdomen purplish brown; under tail-coverts brownish green edged with buff.

The figures are the size of life.



CŒLIGENA PURPUREA, *Gould.*

J. Gould and H. C. Richter, del. et lith.

Hullmandel & Walton, Imp.

CŒLIGENA PURPUREA.

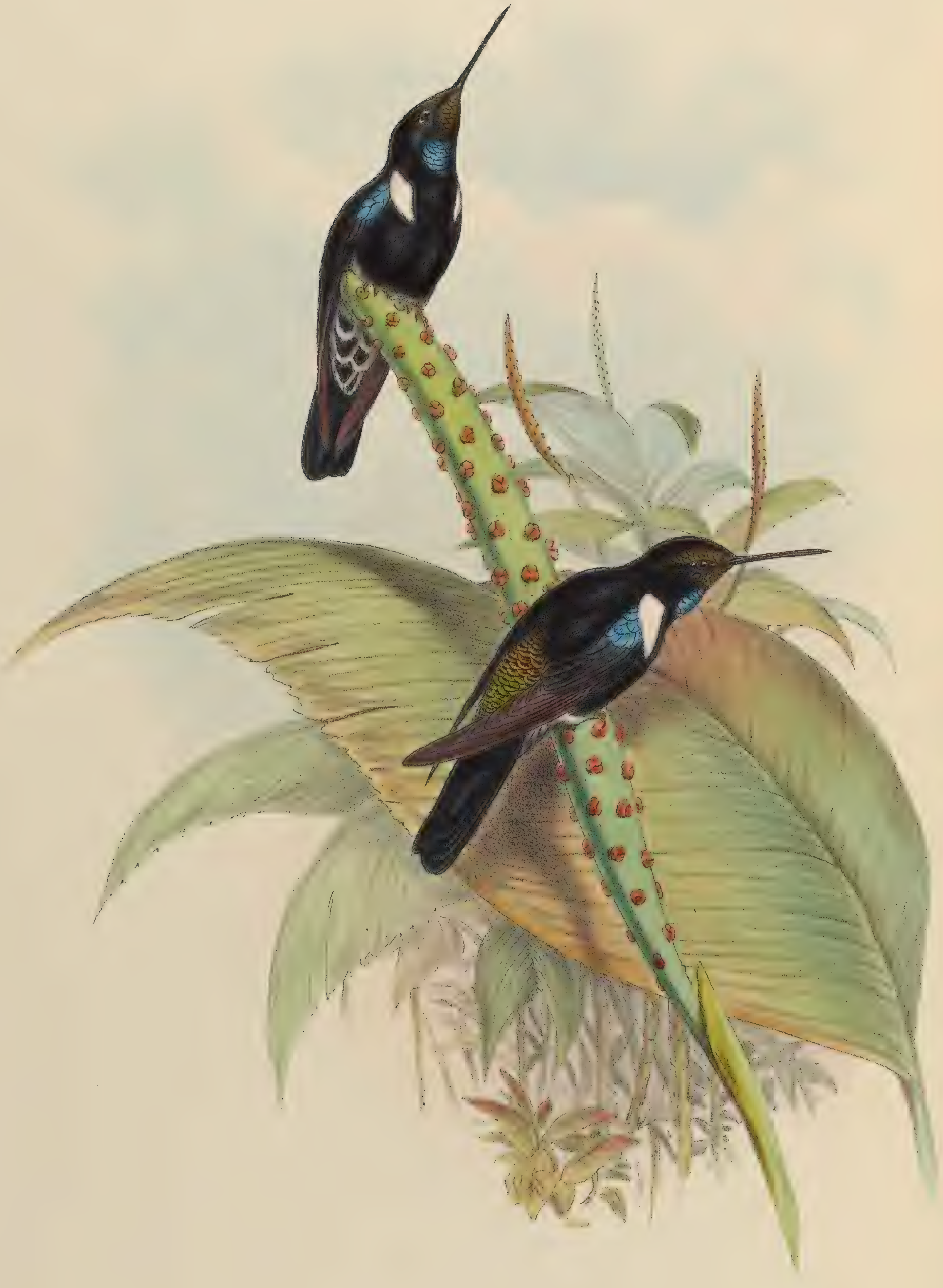
Purple Cœligene.

I have lately received from M. Parzudaki, of Paris, a fine specimen of this bird, which I believe to be from the neighbourhood of Popayan; a second example forms part of the collection of Edward Wilson, Esq., and is said to have been killed in Peru. Both specimens appear to be fully adult, and, like the *Cœligena typica*, they are never adorned with any other metallic colouring than that which occurs on the beautiful fringe-like edges of the feathers of the lower part of the back and rump.

The *Cœligena purpurea* is a larger and more powerful bird than *C. typica*, and differs also from that species in the much deeper colour of the tail, in the rich purple hue of its head, neck and shoulders, and in having a somewhat obscure lunate mark of white on each side the chest; in this last particular it offers an alliance to the *Wilsoni*, but from which also I am convinced it is specifically distinct.

The shoulders bluish purple; head, neck, back and wing-coverts very dark purple, becoming of a bronzy hue on the lower part of the back and rump, where also the feathers are fringed with metallic grass-green, most conspicuous when the bird is viewed from behind; tail very dark bronzy purple; wings purplish brown; on each side the chest a lunate mark of white; the remainder of the under surface very dark purplish brown; the feathers of the throat edged with grey, giving that part a scaly appearance, and the under tail-coverts with buff.

The figures represent the bird of the size of life.



CŒLIGENA PRUNELLI

J. Gould and H. C. Richter, del. et lith.

Hullmandel & Walton, Imp.

CŒLIGENA PRUNELLI.

Prunelle's Cœligene.

Trochilus Prunelli, Bourc. Ann. de la Soc. Sci. de Lyon, tom. vi. 1843, p. 36. pl. 1.—Ib. Rev. Zool. 1843, p. 70.

Mellisuga Prunellei, Gray and Mitch. Gen. of Birds, vol. i. p. 112, *Mellisuga,* sp. 11.

Homophania Prunellii, Reich. Aufz. der Col., p. 10.

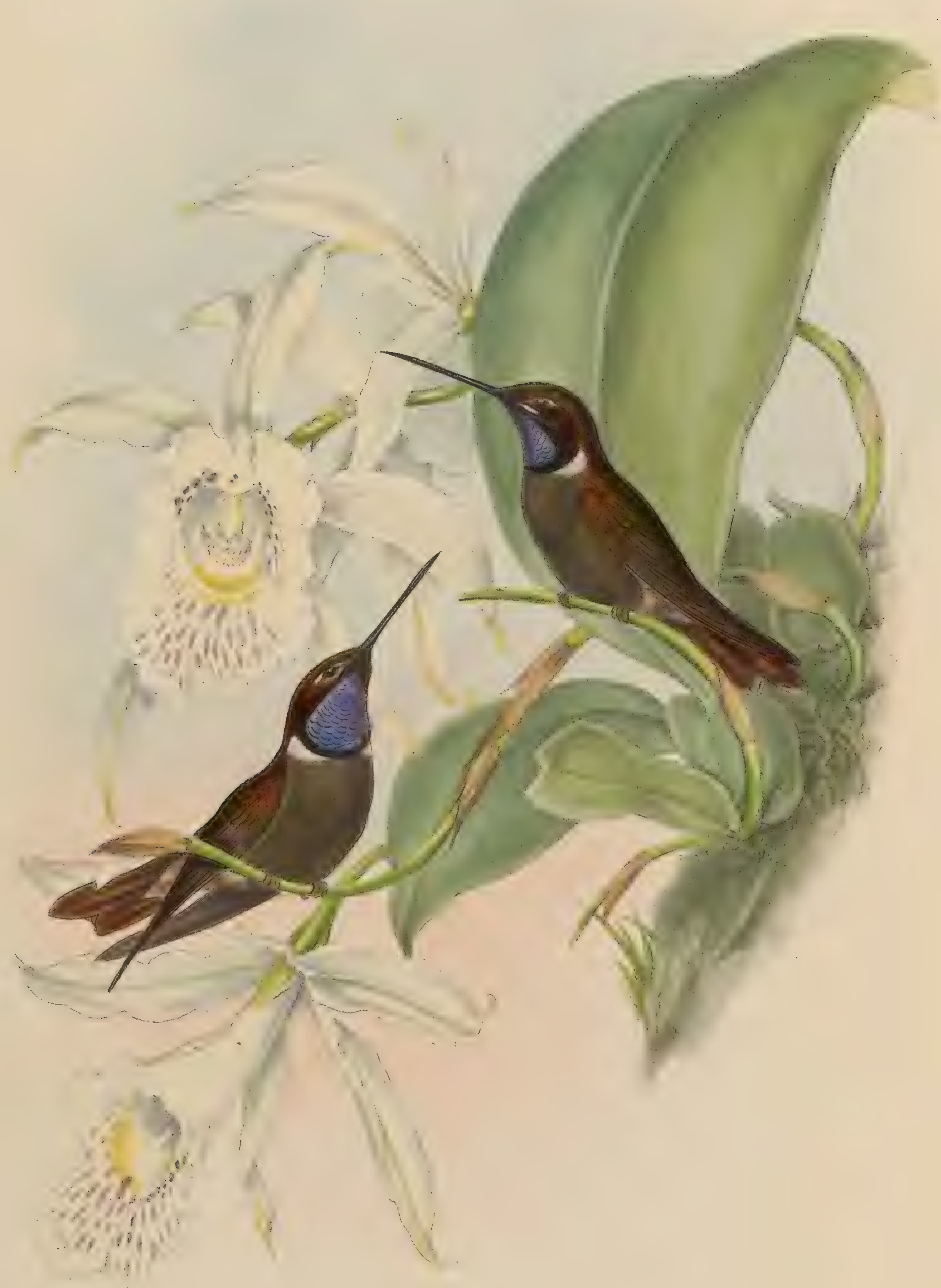
Bourcieria prunellii, Bonap. Rev. et Mag. de Zool. 1854, p. 252.

This, like most of the straight-billed Humming-birds, is a native of Columbia and New Grenada; it is a most interesting and attractive species, and is plentifully sent to this country from Bogota: seldom indeed does a collection arrive from that part of South America which does not contain examples. M. Bourcier gives the environs of Facativa, in Columbia, as one of the localities in which specimens have been procured. The conspicuous white mark on the side of the chest, beautifully relieved by the black of the surrounding parts, the glittering glaucous green of the shoulders, and the variegated colouring of the back, all tend to render it remarkably different from its congeners. The specific name, bestowed upon this bird by M. Bourcier, is intended as a compliment to Dr. Prunelle, one of the scientific celebrities of the city of Lyons.

The sexes present no marked difference in their colouring, but the female is rather less brilliant, and somewhat smaller than her mate.

General plumage dark purplish-black; a bronzy gloss on the forehead; a narrow mark of bluish-green on the lower part of the throat; on each side the chest a large and conspicuous patch of white; wing-coverts steel-blue with green reflexions; wings dark purplish-brown; tail dark velvety purplish-black; under tail-coverts fringed with white; back and upper tail-coverts, when viewed from behind a mass of colour, of which language can convey no idea, being a mingling of crimson, green, purple and red, changing with the direction of the rays of light, or perfectly iridescent; bill black; feet fleshy-brown.

The figures are of the natural size. The plant is a portion of the *Chamædorea Ernesti-Augusti.*



COELIGENA WILSONI.

J. Gould and H.C. Richter del. et lith.

Hullmandel & Walton Imp.

CŒLIGENA WILSONI.

Wilson's Cœligene.

Trochilus Wilsoni, De Latt. et Bourc. Rev. Zool. 1846, p. 305.
Mellisuga Wilsoni, Gray and Mitch. Gen. of Birds, vol. i. p. 112, *Mellisuga,* sp. 13.
Bourcieria Wilsoni, Bonap. Consp. Gen. Av., p. 73, *Bourcieria,* sp. 4.—Ib. Rev. et Mag. de Zool. 1854, p. 252.—Reichenb. Troch. enumer., p. 7. pl. DCCLI. figs. 4723, 4724.
Lampropygia Wilsoni, Reichenb. Aufz. der Colibris, p. 10.

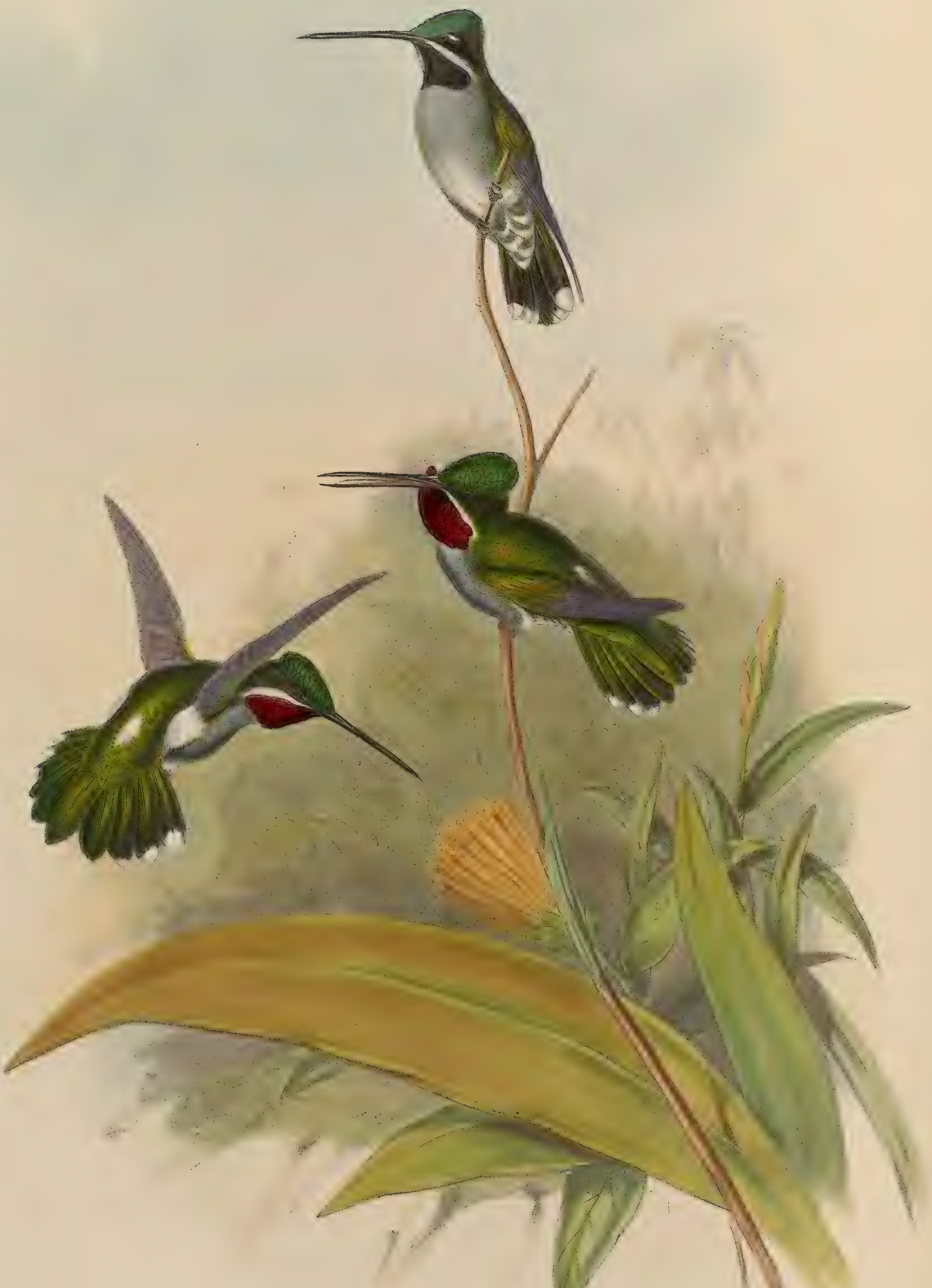
I HAVE little to communicate respecting the bird here figured; it is certainly quite distinct from every other with which we are acquainted, but I doubt not that I have placed it in that genus to which it truly belongs, namely, *Cœligena*; for, upon comparing it with the well-known species, *C. typica* and *C. purpurea,* no structural differences whatever are observable; and the distribution of the colouring is very similar, the only exception being that the throat of this species is luminous; the three birds are in fact intimately allied, and, with the *Prunelli,* appear to me to constitute a natural group, which does not admit of or require separation; one very peculiar character—the lustrous fringing of the feathers of the back and rump—being common to the whole of them, and not observable in any others of the Trochilidæ yet discovered.

The *Cœligena Wilsoni* has been named in honour of Edward Wilson, Esq., of Tenby in Pembrokeshire, a gentleman who, although not himself a professed ornithologist, has contributed both largely and liberally towards the promotion of that branch of science. The native country of the bird is Ecuador, whence it extends northward to the latitude of Bogota, and southward to the confines of Peru. But little difference will, I believe, be found in the colouring of the sexes; the female as well as the male, in all the specimens I have seen, possesses the purple colouring of the throat, but in no instance to so great an extent as in the latter sex.

M. Bourcier states, that in the neighbourhood of Quito it inhabits the sheltered valleys of the Andes, at an elevation of ten thousand feet, and that he has killed numerous specimens in the valley of Nono, to the north of Quito.

Head and all the upper surface bronzy brown, changing to bronzy green on the wing-coverts and back, the green of the back being most apparent when viewed from behind; upper tail-coverts bronzy brown; wings purplish brown; tail bronze, changing to green towards the margin of the feathers, and narrowly edged with dark brown; chin and ear-coverts dark brown; throat fine purple, bounded on the sides and below by a narrow band of brownish black; on each side the neck a patch of greyish white; under surface obscure brownish grey washed with bronze; under tail-coverts reddish brown; bill black; feet brown.

The Plate represents the two sexes of the size of life. The plant is the *Trichopilia suavis.*



HELIOMASTER LONGIROSTRIS.

J. Gould and H. C. Richter del. et lith.

Hullmandel & Walton, Imp.

HELIOMASTER LONGIROSTRIS.

Long-billed Star-throat.

Trochilus longirostris, Vieill. Ois. dor., tom. i. p. 107. pl. 59.—Ib. 2nde Edit. du Nouv. Dict. d'Hist. Nat., tom. vii. p. 366.—Ib. Ency. Méth. Orn., part ii. p. 566.

——— *superbus,* Shaw, Nat. Misc., vol. xiii. pl. 517.—Ib. Gen. Hist., vol. viii. p. 323. pl. 41. fig. 2.—Temm. Pl. Col. 299. fig. 1.—Jard. Nat. Lib. Humming Birds, vol. ii. p. 94.

Ornismya superba, Less. Hist. Nat. des Ois. Mou., p. 40. pl. 2.—Ib. Hist. Nat. des Col., p. 164. —Supp. des Ois. mou., pl. 33.—Ib. Les Troch., p. 99. pl. 34.—Ib. Traité d'Orn. p. 278.

Long-billed Humming Bird, Lath. Gen. Hist., vol. iv. p. 354.

Mellisuga longirostris, Gray and Mitch. Gen. of Birds, vol. i. p. 112, *Mellisuga,* sp. 4.

Heliomaster longirostris, Bonap. Consp. Gen. Av., p. 70, *Heliomaster,* sp. 2.

Although not known to Linnæus, this species of Humming Bird is one of those with which ornithologists have been longest acquainted, having been figured early in the present century in Shaw's "Naturalist's Miscellany," and the "Oiseaux dorées" of M. Vieillot. Most of the specimens contained in our collections are from the island of Trinidad, where it appears to be common; it also inhabits the neighbouring countries of the continent—Demerara, Cayenne, and the Caraccas, specimens from all of which are precisely alike in every particular. I have no positive evidence that it crosses to the Isthmus of Panama, or that it inhabits the States of Veragua and Costa Rica, but a species is there found to which it is so nearly allied, that the two birds might easily be confounded.

The *Heliomaster longirostris* is subject to considerable variation in its colouring, due either to age or sex, but the true cause of which is at present unknown; thus individuals are often found with the throat almost entirely black, with a well-defined white line running from the gape down each side of the neck, and with the whole of the under surface of a much lighter grey than is observed in others, in which the rich colouring of the crown and throat is fully developed.

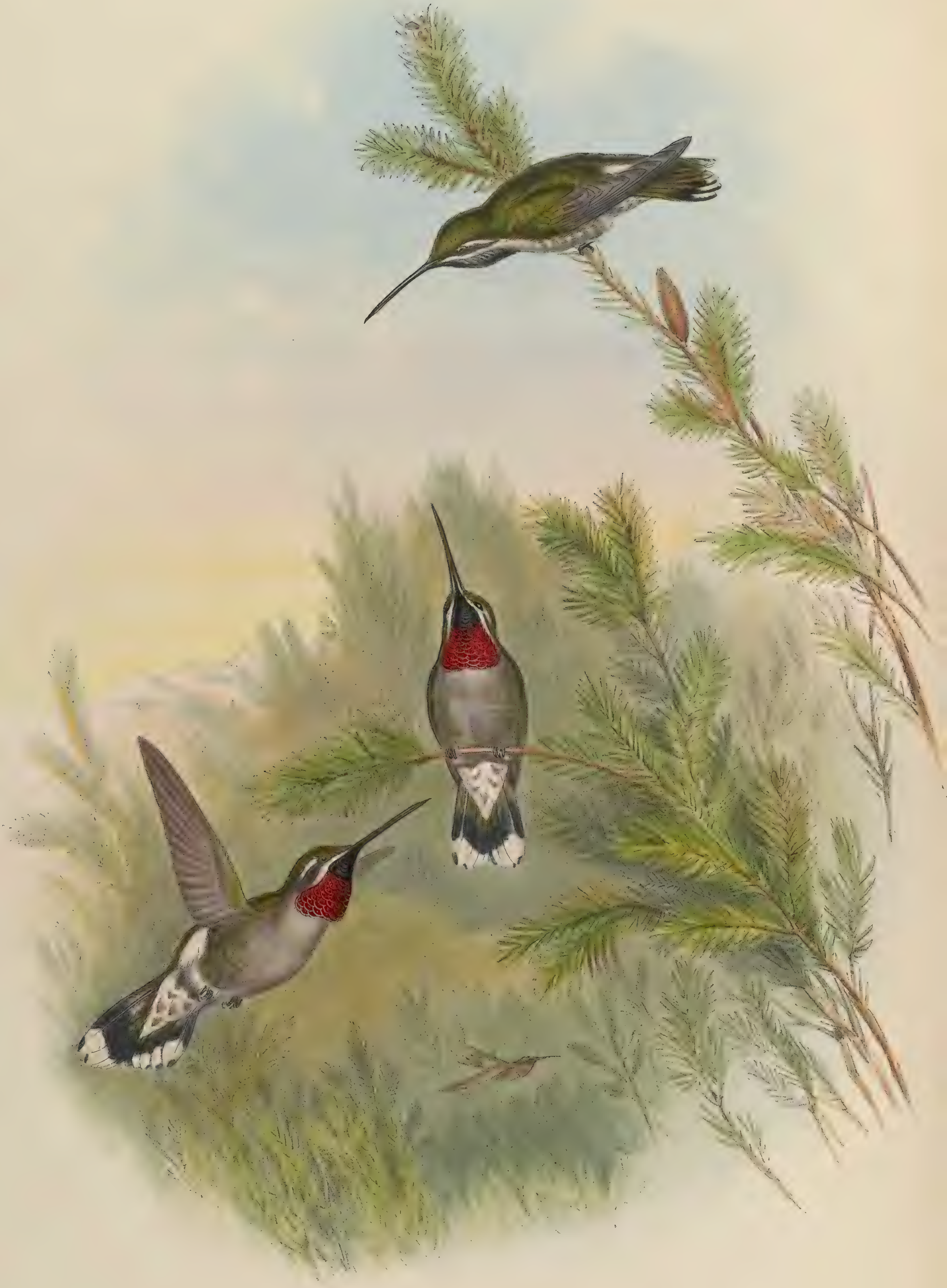
The descriptions given below are of individuals exhibiting the extreme variations of plumage and the intermediate state.

Forehead and crown metallic green, slightly tinged with blue; chin black; throat luminous crimson; occiput and nape greenish bronze; upper surface and wing-coverts shining green, with a bronzy lustre; on the centre of the back a longitudinal mark of white; wings deep purple-brown; two centre tail-feathers bronzy green, the remainder bronzy green at the base, passing into the dull black of their apical portion; the outer feather on each side with a large oval spot of white at the extremity of the inner web, the next with a smaller spot in the same position, and the third with a minute spot at the tip; below the eye a streak of black, and beneath this another of white; under surface grey, with a broad irregular line of white down the centre, and with a wash of green on the flanks, between which and the back is a tuft of snow-white feathers; under tail-coverts olive-brown, margined and tipped with white; bill black; feet blackish brown.

In another, perhaps the youthful state, the upper surface is brown, glossed with bronzy green; the white spots at the tips of the outer tail-feathers are larger, especially that on the third; the throat is black, glossed on the lower part only with dull metallic crimson; the under surface lighter, and the white mark on the side of the face much more conspicuous.

The supposed female is very similar to the last, but is altogether of a much darker or browner hue on the upper surface, and has no trace of the crimson lustre on the throat; both have the white mark on the back and the white tufts on the sides equally conspicuous.

The Plate represents two adult males, and what is supposed to be an adult female.



HELIOMASTER CONSTANTI.

J Gould and H C Richter, del et lith. *Hullmandel & Walton Imp.*

HELIOMASTER CONSTANTI.

Constant's Star-throat.

Trochilus Constantii, De Latt. Echo du Monde Savante, Juin 1843.

I have for a long time had examples of this bird in my collection with the name of *Constanti* attached thereto, but I have not as yet been able to find a description of it in any work; the "Echo du Monde Savante," in which it is said to be described, being merely a kind of newspaper or journal of the day, and consequently seldom cared for after perusal, is now so rare as to be unprocurable. I must therefore content myself with concluding that the name has been rightly applied.

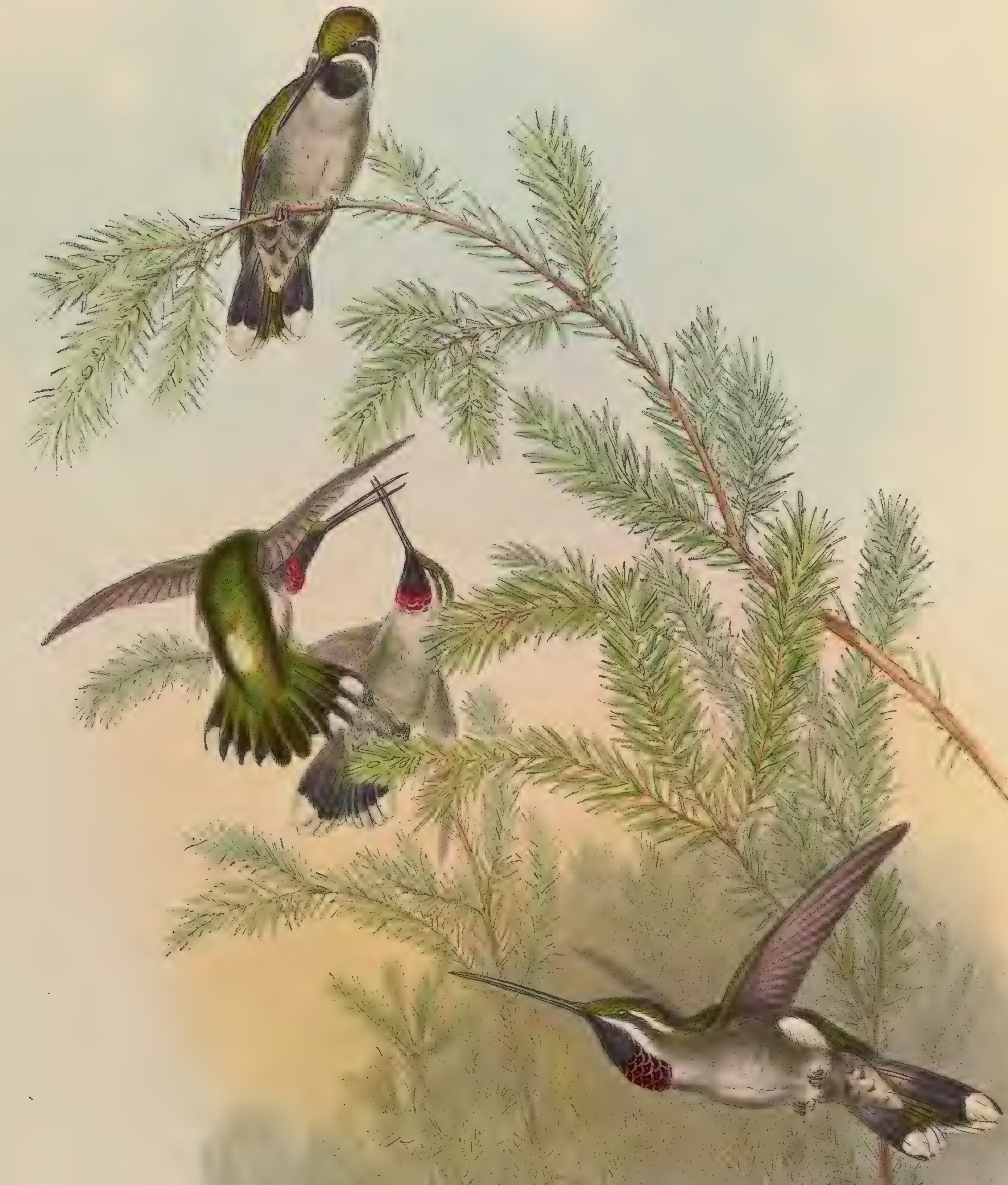
I have received numerous examples direct from Guatemala, which I can affirm to be its true habitat; I have never seen it from the more southern countries of Veragua and Costa Rica, or the comparatively northern ones of Mexico proper; I have but little doubt that it inhabits the temperate and sterile regions of that country, especially those that are favourable to the growth of pines and various species of oak. Its brilliant scarlet throat will at all times serve to distinguish this from the other members of the genus.

The sexes present the usual difference of size, the female being smaller than her mate; in their colouring they are very similar, but the extent of the red on the throat is much less, and occupies the lower portion only in the female; and in some individuals of this sex is almost obsolete.

The tufts of white feathers on the sides, the irregular line of the same hue down the centre of the band, and the white line descending from the gape, are conspicuous features in this species.

Head, the upper surface, wing- and tail-coverts bronzy green, deepening into a sooty hue on the forehead; wings dull purplish brown; two centre tail-feathers bronzy green, the remainder bronzy green at the base, passing into black towards the tip, the extent of the green decreasing and of the black increasing as the feathers recede from the centre; each with a spot of white at the tip, that on the outer one occupying both webs, but not reaching quite to the tip of the outer web; the white spot on the others at the extremity of the inner web and gradually decreasing in size; spot behind the eye, streak down the cheeks, tuft on each side, and a line down the rump, white; chin black; throat rich deep luminous metallic red; under surface grey, washed with bronzy green on the flanks; under tail-coverts olive-brown, margined with white; bill black; feet dark brown.

The figures are of the natural size.



HELIOMASTER PINICOLA, *Gould.*

J Gould and H C Richter, del et lith *[illegible] Walton Imp*

HELIOMASTER PINICOLA, *Gould.*

Pine Star-throat.

Heliomaster pinicola, Gould in Proc. of Zool. Soc. 1853.

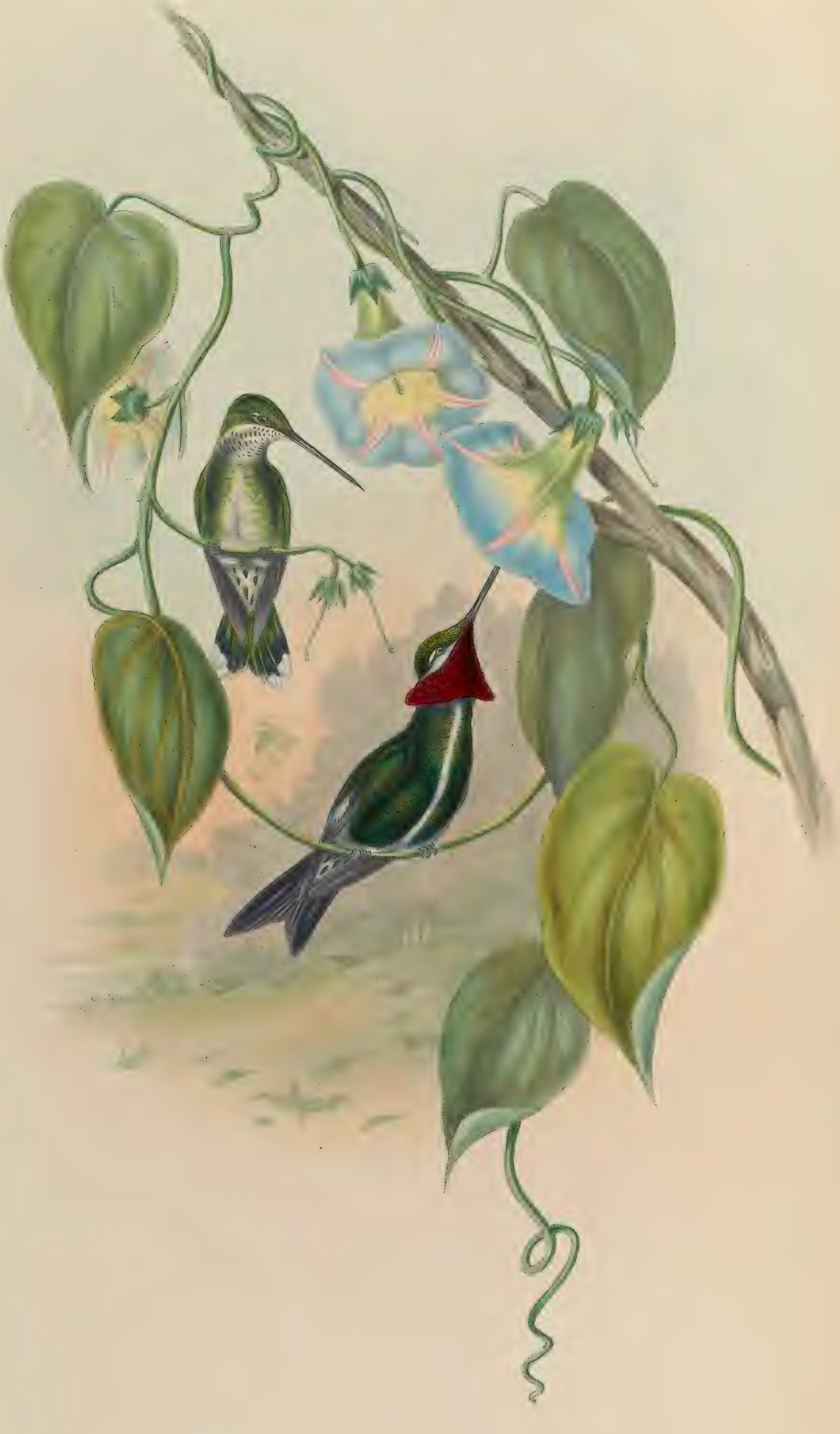
THE late Damiano Floresi will always be remembered by Trochilidists as one who has been the means of making known to us many of the Humming Birds of Mexico, and in acknowledging the value of his exertions, I feel that I am only rendering justice to one to whom we are all so largely indebted, and I would add, that none of his numerous friends more sincerely regrets his premature decease than myself. It is to him that we owe the discovery of the bird figured on the accompanying Plate. M. Floresi informed me that the almost sole habitat of this species is the lofty pine ridges of Northern Mexico, a circumstance affording additional evidence that a peculiar vegetation is accompanied by a corresponding peculiarity in animal life; thus, the vegetation of its habitat being of a sombre character, the colouring of the present bird is of a similar hue, rendering it conspicuously different from most other Humming Birds. It is the northern or Mexican representative of the *H. Constanti* of Guatemala, to which it is very nearly allied, but from which it differs in being somewhat larger in size, in having a more mealy grey style of plumage, in the feathers of the red gorget being of a crimson rather than a scarlet hue, in their occupying the lower part of the throat only, and in each of these feathers being fringed with grey.

The same difference in the size of the sexes occurs in this as in the other species, and the female also differs from her mate in having a trace only of the gorget on the lower part of the throat.

Head, upper surface, wing- and tail-coverts dull bronzy green, passing into dark grey on the forehead; wings dull purplish brown; two centre tail-feathers bronzy green, tipped with purplish black; lateral feathers bronzy green at the base, passing into purplish black; the extent of the green decreasing and of the black increasing as the feathers recede from the centre, each with a spot of white at the tip, that on the outer one occupying both webs, but not reaching quite to the margin of the outer one, the white spot on the others at the extremity of the inner web and gradually decreasing in size; spot behind the eye, streak down the cheeks, streak down the rump, tuft on each flank, and vent, white; upper part of the throat dark grey, each feather narrowly fringed with white; lower part of the throat deep luminous crimson, each feather margined with grey; under tail-coverts brown, largely tipped with white; bill black; feet dark brown.

The figures represent the two sexes of the size of life.

By some inadvertence the term *Heliomaster* has been printed on the Plate *Helioster.*



J Gould and H C Richter, del et lith

HELIOMASTER MESOLEUCUS.

Hullmandel & Walton Imp

HELIOMASTER MESOLEUCUS.

Stripe-breasted Star-throat.

Trochilus mesoleucus, Temm. Pl. Col. 317.
———— *longirostris*, Natt. (Bonap.).
———— *squamosus*, Temm. Pl. Col. 203. fig. 1.
———— *mystacinus*, Vieill. Ois. dor., tom. iii. ined. pls. 21 male, 22 female, 23 young.
Ornismya Temminckii, Less. Hist. Nat. des Ois. Mou., p. 88. pl. 20.
———— *mesoleuca*, Less. Hist. Nat. des Ois. Mou., p. 110. pls. 29, 30.—Ib. Traité d'Orn., p. 278.
Mellisuga mesoleuca, Steph. Cont. of Shaw's Gen. Zool., vol. xiv. p. 246.
———— *squamosa*, Steph. Cont. of Shaw's Gen. Zool., vol. xiv. p. 245.
———— *melanoleuca*, Gray and Mitch. Gen. of Birds, vol. i. p. 112, *Mellisuga*, sp. 5.
Heliomaster mesoleucus, Bonap. Consp. Gen. Av., p. 70, *Heliomaster*, sp. 3.

While *H. longirostris* inhabits the north-eastern shores of South America, and *H. Angelæ* the southern, the present species dwells in the intermediate country, its more favourite localities appearing to be the interior districts rather than those near the coast; for although it is rarely found in the immediate vicinity of Rio de Janeiro, it is tolerably numerous in the rich provinces of Minas Geraes, and from thence extends to the latitudes of Bahia and Pernambuco. Mr. Reeves, who has afforded me much information respecting many species of this family, simply says, in reference to the present bird, that it "inhabits Minas Geraes and Bahia, but is rare in Rio:" to this gentleman, however, I am indebted for a nest of this species, which is remarkable for the situation in which it is deposited,—the middle of a lengthened, pendent, rope-like mass of lichen, probably a species of *Usnea*; the nest itself being constructed of some glossy vegetable material, apparently the scales from the receptacle of one of the *Compositæ*, decorated on the outside with small flakes of a pale buffy coloured bark, and lined within with a substance, which would seem to be the white silky hairs which crown the seeds of some species of *Asclepiadeæ*.

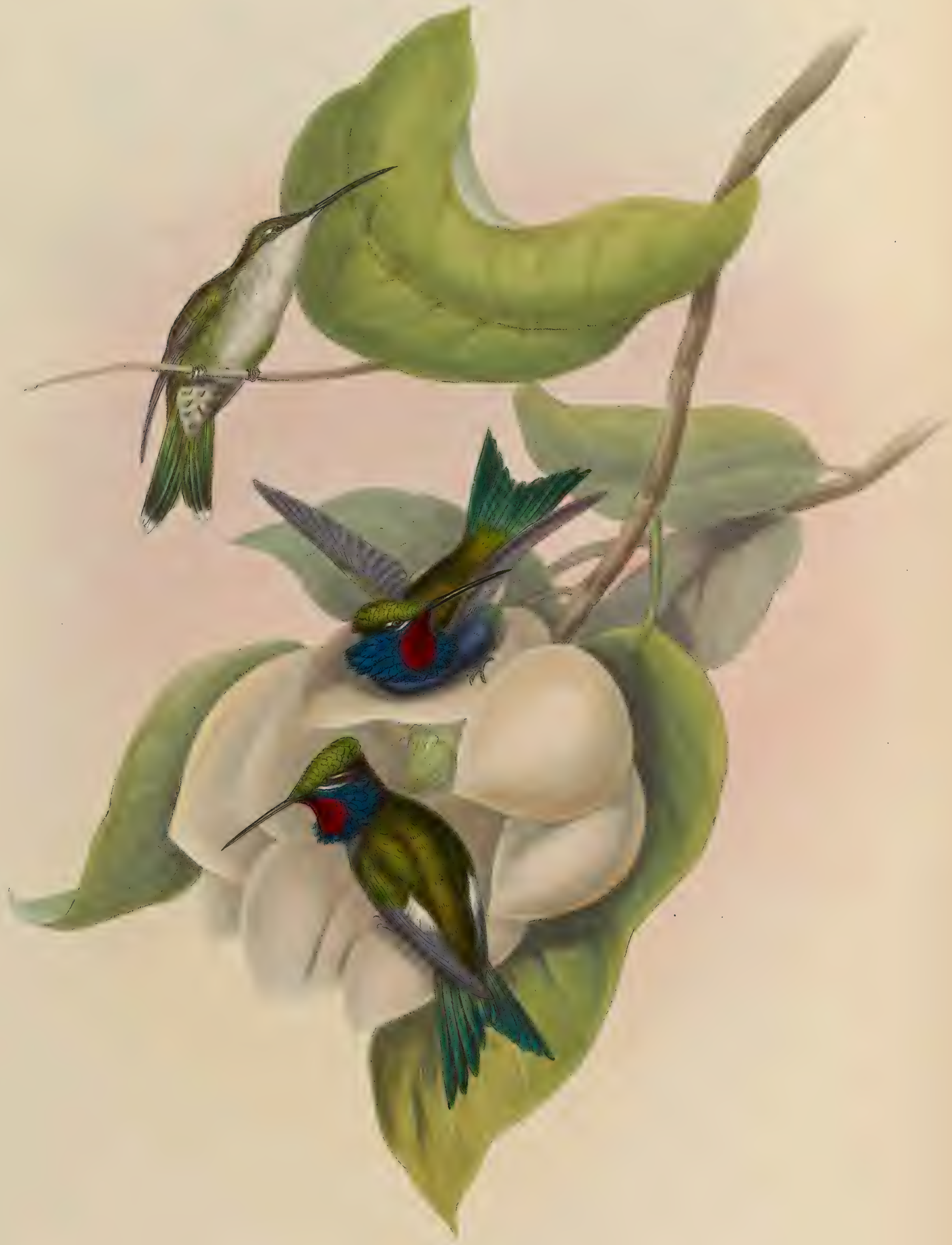
The material of which the nest is composed varies, apparently in accordance with the materials at hand, but it appears to be always attached to some pendent object, a mass of lichens, a leaf, &c., as in an account published by the Vicomte de Tarragon in the "Revue Zoologique" for 1844, of a nest in his possession, he states that it is "attached vertically, by means of some viscid substance, to a large leaf of a plant unknown to me, but which in its shape and size exactly resembles a leaf of *Catalpa*. It is composed entirely of cotton, without a particle of any other material."

Head luminous grass-green; throat-frill luminous purplish crimson; upper surface and wing-coverts bronzy green; two centre tail-feathers deep green, glossed with bronze, remainder of the tail-feathers purplish black; beneath the eye a line of white; under surface very dark green, with an irregular line of white down the centre, and a tuft of white feathers on the sides between the flanks and back; under tail-coverts blackish green, margined and tipped with white; bill black; feet dark brown.

The young are very similar in colour, but the green of the head is much less brilliant, and the throat-feathers are black bordered with white, giving that part a scaly appearance, whence M. Temminck's name of *squamatus*.

The female has the whole of the upper surface bronzy green; the tail-feathers greenish bronze at the base passing into black, the three outer feathers on each side tipped with white, the white being conspicuous on the outer one, less so on the next, and still less on the third; throat-feathers dark olive, margined with white; under surface bronzy green, with a mesial stripe of white.

The figures represent the two sexes of the natural size.



HELIOMASTER ANGELÆ.

J. Gould and H. C. Richter, del. et lith.

Hullmandel & Walton

HELIOMASTER ANGELÆ.

Angela Star-throat.

Ornismya Angelæ, Less. Ill. de Zool., pl. 45.
Heliomaster angelæ, Bonap. Consp. Gen. Av., p. 70, *Heliomaster,* sp. 1.

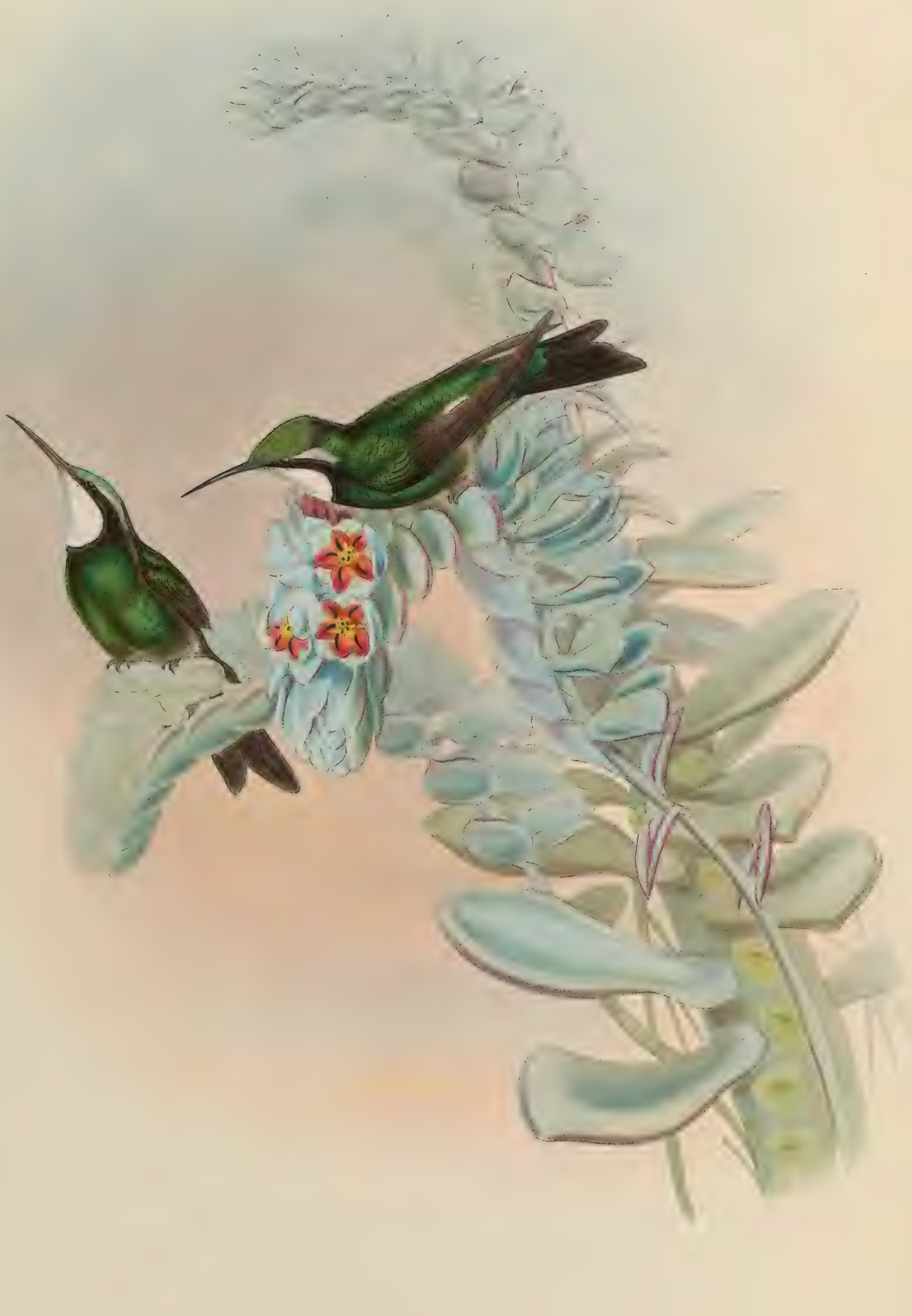
This very beautiful Humming Bird ranges over the countries of Buenos Ayres, Corrientes, and I believe the banks of the Parana generally; it is from these countries alone that I have received specimens, and never from Chili, as stated by M. Lesson; in addition to these localities, Mr. Reeves informs me that it also inhabits Matto-grosso in Brazil. It is by no means common in our collections, a circumstance doubtless owing to its habitat not having been often visited by collectors from France or from this country; otherwise, from its extreme beauty and elegance, it could not have failed to attract their notice.

In the absence of all information respecting the habits and economy of this species, M. Lesson, after noticing the lengthened and slender form of the bill, remarks, that ordinarily it must obtain its food from the bottoms of bell-shaped flowers; and that it is from within the flowers of the Bignonias and of the long lianes with tubular corollas, which entwine and interlace each other in the forests of the New World, that this Humming Bird procures the small soft insects upon which it feeds.

Crown of the head luminous metallic green, changing in some lights to aquamarine, in others to bluish green, and in others to golden green; all the upper surface and the wing-coverts golden green, the golden hue predominating on the lower part of the back; wings purplish brown; tail purplish black, glossed with dark green; immediately behind the eye a spot of white, and on the cheeks a streak of grey; centre of the throat rich metallic purplish crimson, on each side of which is a series of elongated feathers of a rich deep metallic blue; under surface deep green, passing into rich blue on the middle of the body; tuft on each side and vent white; under tail-coverts green, fringed with white; bill black; feet blackish brown.

The female has the whole of the upper surface golden bronze, inclining to grey on the crown; tail green, deepening into black towards the extremity, and a spot of white at the tip of the three outer feathers of each side; wings purplish brown; all the under surface grey, fading into white on the throat and middle of the abdomen.

The Plate represents two males and a female of the natural size.



OREOPYRA LEUCASPIS, *Gould.*

J. Gould and H. C. Richter, del. et lith.
Walter & Cohn, Imp.

OREOPYRA LEUCASPIS, *Gould.*

White-throated Oreopyra.

Oreopyra leucaspis, Gould in Proc. of Zool. Soc., part xxviii. p. 312.

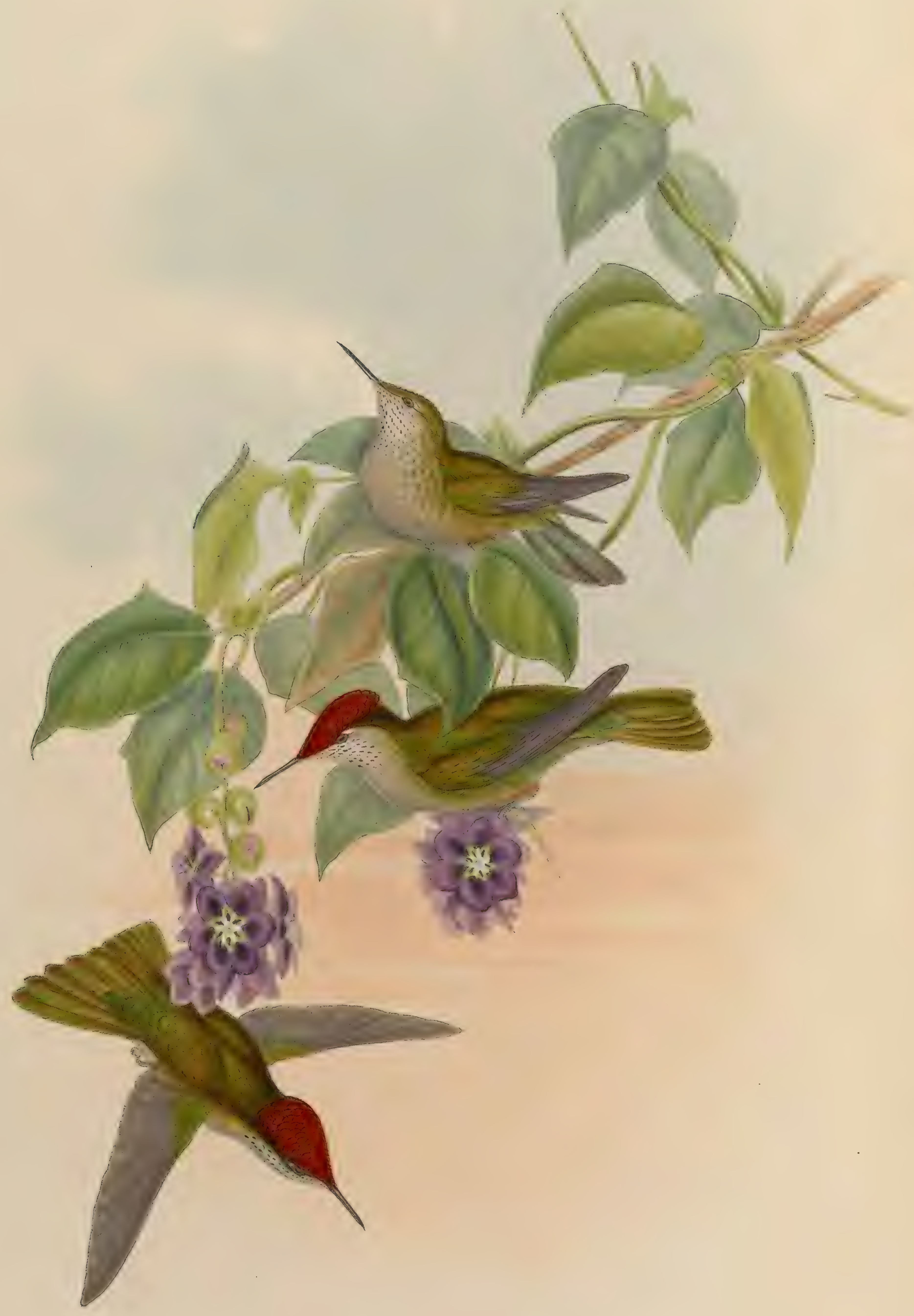
With what activity and perseverance the South American traveller, Warszewicz, scaled the sides of the volcano of Chiriqui, and how well his exertions were rewarded, the curious and interesting Humming-Bird represented on the accompanying Plate will testify. I delayed describing this new bird for several years after it came into my possession, in the hope that additional examples might arrive; but up to the present month of March (1861) I have only seen the single individual from which my figure is taken, and which graces my own collection. This unique example is, I am sorry to say, in a very bad state of preservation; it is evidently a mature male, which, when shot, was in all the splendour of a fresh moult; but so woefully is it mutilated, that I am scarcely able to figure it with accuracy. Under these circumstances, it is much to be desired that some other traveller should procure us additional examples, and transmit at the same time an account of its habits, and not omit to inform us if the sexes offer any marked differences in their style of colouring. I am particularly desirous of information on this latter point, because I have for some years entertained a suspicion that the birds I have mentioned in my account of *Adelomyia castaneoventris* may be related to the present bird,—a point which further research alone can enable us to determine.

The *Oreopyra leucaspis* differs from every other member of the family in the beautiful silvery whiteness of its throat, relieved by the surrounding black and green of the body and the glittering grass-green of the crown; I have therefore made it the type of a new genus. It is as elegant in all its proportions as in its colouring it is chaste and harmonious; consequently, when better known, it will doubtless become a great favourite with collectors.

The volcano of Chiriqui is situated in Costa Rica, a region evidently teeming with objects of beauty and novelty: it was here, at an elevation of from nine to ten thousand feet, that M. Warszewicz shot the bird, and immediately transmitted to me a drawing of it in a letter; and I offer my best thanks to this gentleman for his kind attention.

Crown of the head exceedingly beautiful glittering grass-green; back of the neck and all the upper surface deep grass-green with bronzy reflexions; throat pure white, contrasting conspicuously with the glittering grass-green of the breast; flanks and abdomen greyish green with bronzy reflexions; wings purplish brown; tail forked and steel-black; thighs thickly clothed with hoary or greyish-brown feathers; behind the eye, and extending some distance down the sides of the neck, is a stripe of pure white; bill straight, and both mandibles of a uniform black.

The figures are of the natural size. The plant is the *Pachyphytum bracteosum.*



EUSTEPHANUS GALERITUS.

J Gould, and H C Richter, del et lith

Hullmandel & Walton Imp.

EUSTEPHANUS GALERITUS.

Chilian Fire-crown.

Trochilus galeritus, Mol. Hist. of Chili, p. 219.—Lath. Ind. Orn., tom. i. p. 304.—Buff. Sonn. Edit., tom. liii. p. 317.—Vieill. Ency. Méth. Orn., part ii. p. 532.

Colibri du Chili, Aud. et Vieill. Ois. dor., tom. i. p. 125.

Chili Humming-Bird, Lath. Gen. Syn. Supp., vol. ii. p. 170.—Ib. Gen. Hist., vol. iv. p. 300.

Mellisuga Kingii, Vig. in Zool. Journ., vol. iii. p. 432.

Ornismya sephanoïdes, Less. et Garn. Voy. de la Coq. Ois., pl. 31. fig. 2.—Less. Hist. Nat. des Ois. mou., p. 69. pl. 14.—Supp. p. 109. pl. 5.

Trochilus sephanoïdes, Jard. Nat. Lib. Humming-Birds, vol. i. p. 118. pl. 12.

———— *forficatus*, Zool. of Beagle, part iii. Birds, p. 110.

———— *flammifrons*, Lyell.

Mellisuga galerita, Gray and Mitch. Gen. of Birds, vol. i. p. 113, *Mellisuga*, sp. 93.

Sephanoides galerita, Bonap. Consp. Gen. Av., p. 82, *Sephanoides*, sp. 1.

If our celebrated voyager Captain Cook added to his renown as a circumnavigator by discovering that the Rufous Flame-bearer (*Selasphorus rufus*) is an inhabitant of the high north-western regions of America, scarcely less interesting was the discovery made by Captain King, that the present fine species is a denizen of Terra del Fuego, the extreme southern limits of that great continent, where it was observed by him flitting about among flowering shrubs in the midst of a snow-storm. It is impossible to conceive why so delicate a creature should voluntarily resort to situations apparently so opposite to those for which it seems fitted; and our wonder that it does so is much increased, when we find that it is capable of performing migrations over a vast extent of country, passing, as it does, the summer in Patagonia and the southern parts of Chili, and retiring northwards to the confines of Peru, when the season becomes too rigorous for it to sustain life in those regions.

Mr. Darwin has given so admirable an account of this species in his Zoology of the Voyage of H.M.S. Beagle (where by some inadvertence the name and synonyms belonging to another species have been given to it), that it would be an act of injustice to this accomplished naturalist were I not to give the entire passage in his own words.

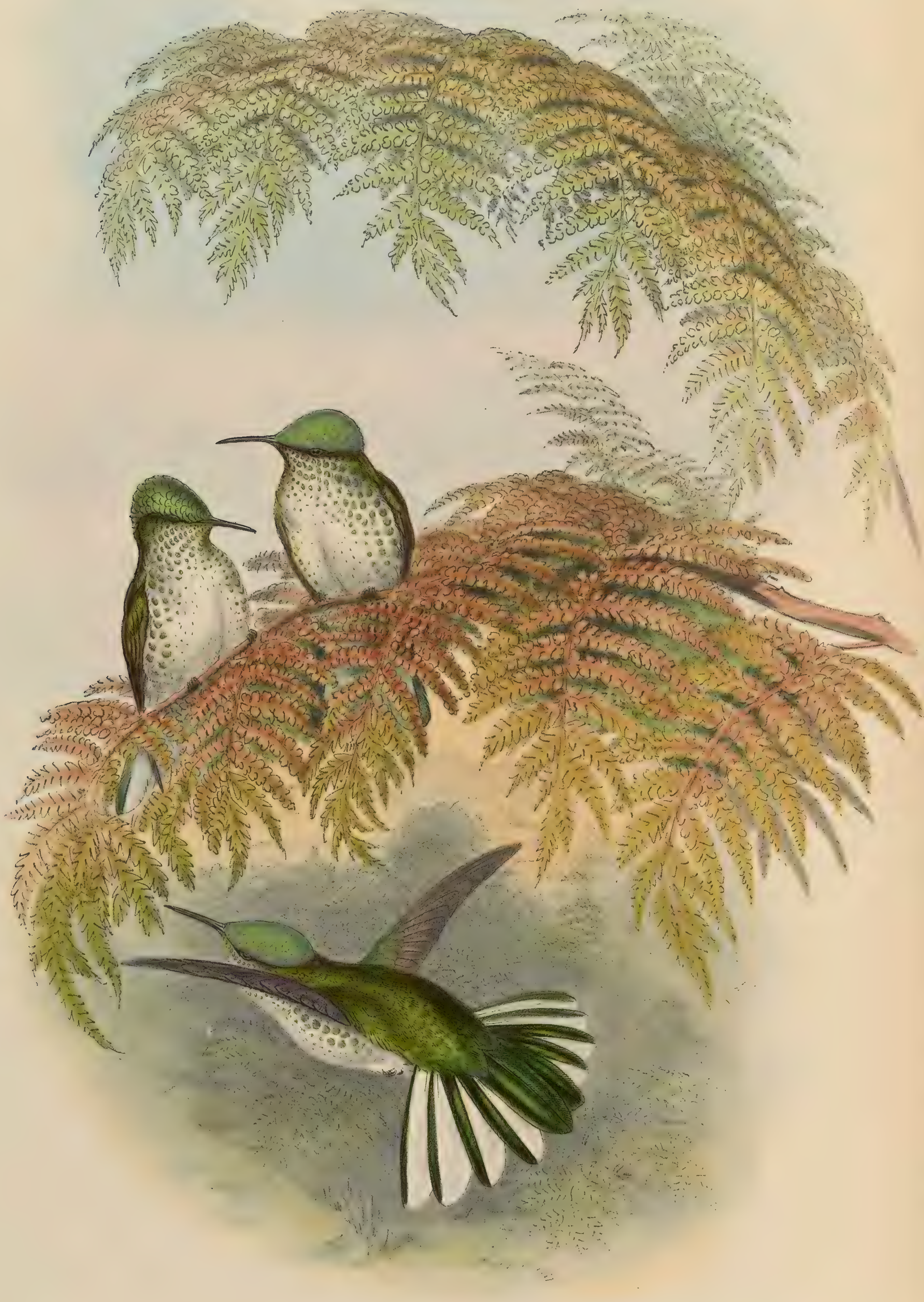
"This species," says Mr. Darwin, "is found over a space of 2500 miles on the west coast, from the hot dry country of Lima to the forests of Terra del Fuego, where it has been described by Captain King as flitting about in a snow-storm. In the wooded island of Chiloe, which has an extremely damp climate, this little bird, skipping from side to side amidst the humid foliage, and uttering its acute chirp, is perhaps more abundant than any other kind. It there very commonly frequents open marshy ground, where a kind of Bromelia grows: hovering near the edge of the thick beds, it every now and then dashes in close to the ground; but I could not see whether it ever actually alighted. At that time of the year there were very few flowers, and none whatever near the beds of Bromelia. Hence I was quite sure that they did not live on honey; and on opening the stomach and upper intestine, by the aid of a lens I could plainly distinguish, in a yellow fluid, morsels of the wings of Diptera, probably Tipulidæ. It is evident that these birds search for minute insects in their winter-quarters under the thick foliage. I opened the stomachs of several specimens which were shot in different parts of the continent, and in all remains of insects were numerous, forming a comminuted mass. In one killed at Valparaiso, I found portions of an ant. Amongst the Chonos Islands, at a season when there were flowers in open places, the damp recesses of the forests appeared their favourite haunt. In central Chili these birds are migratory; they make their appearance there in autumn: the first arrival which I observed was on the 14th of April (corresponding to our October), but by the 20th they were numerous. They stay throughout the winter, and begin to disappear in September: on the 12th of October, in the course of a long walk, I saw only one individual. During the period of their summer migration, nests were very common in Chiloe and the Chonos Islands, countries south of Chili. Near the south end of Chiloe, I found on the 8th of December a nest with eggs nearly hatched. It was of the ordinary form, rather more than an inch in internal diameter, and not deep, composed externally of coarse and fine moss neatly woven together, and lined with dry confervæ, forming a very fine reddish fibrous mass. I feel no doubt regarding the nature of this latter substance, as the transverse septa were quite distinct; hence we may infer that this Humming-bird builds its nest entirely of cryptogamic plants. The eggs were perfectly white, elongated, or rather almost cylindrical, with rounded ends; ·557 of an inch in length, and ·352 of an inch in transverse diameter. In January, at the Chonos Islands, when there were young in the nest, a considerable number of old birds were shot; of these, however, few or scarcely any had the shining crest of the male. In the only specimen, which I carefully examined, the metallic tips of the young feathers of the crest were just beginning to protrude. Several of these males without their crest had a yellowish gorge, and I saw some with a few light brown feathers on their backs; these appearances being doubtless connected with their state of moult."

The description of this bird in Molina's 'History of Chili,' where it was first named, is so very inaccurate, that, had we not other evidence upon which we can rely, that his description cannot refer to any other species, I should have hesitated about adopting his specific appellation; as, however, there can be no doubt on the subject, and the name has priority over that assigned to it by Mr. Vigors in honour of Captain King, I have, like other ornithologists, retained the name originally given.

The male has the crown of the head rich, deep, glittering, fiery orange-red; upper surface, wing-coverts and tail bronzy green; wings purplish brown; throat greyish white, with a small oval spot of brown near the tip of each feather; breast and abdomen greyish brown, glossed on the flanks and spotted on the breast with bronzy green; under tail-coverts pale bronzy green, margined with greyish white; bill black; feet brown.

The female and young males of the year are similar in colour to the male in every respect, except in being entirely destitute of the luminous crown, that part being of a dull brown.

The figures represent two males and a female, on the *Lardizabala biternata*, of the natural size.



EUSTEPHANUS STOKESI.

J. Gould and C. H. Richter, del. et lith. Hullmandel & Walton, Imp.

EUSTEPHANUS STOKESI.

Stokes' Humming Bird.

Trochilus Stokesii, King in Proc. of Comm. of Sci. and Corr. of Zool. Soc., Part I. p. 30.—Less. Les Troch., p. 135. pl. 50.—Jard. Nat. Lib. Humming Birds, vol. ii. p. 55. pl. 5.

Mellisuga Stokesii, Gray and Mitch. Gen. of Birds, vol. i. p. 113, *Mellisuga*, sp. 94.

Sephanoides stokesi, Bonap. Consp. Gen. Av., p. 82, *Sephanoides*, sp. 2.—Ib. Consp. Troch. in Rev. et Mag. de Zool. 1854, p. 256.

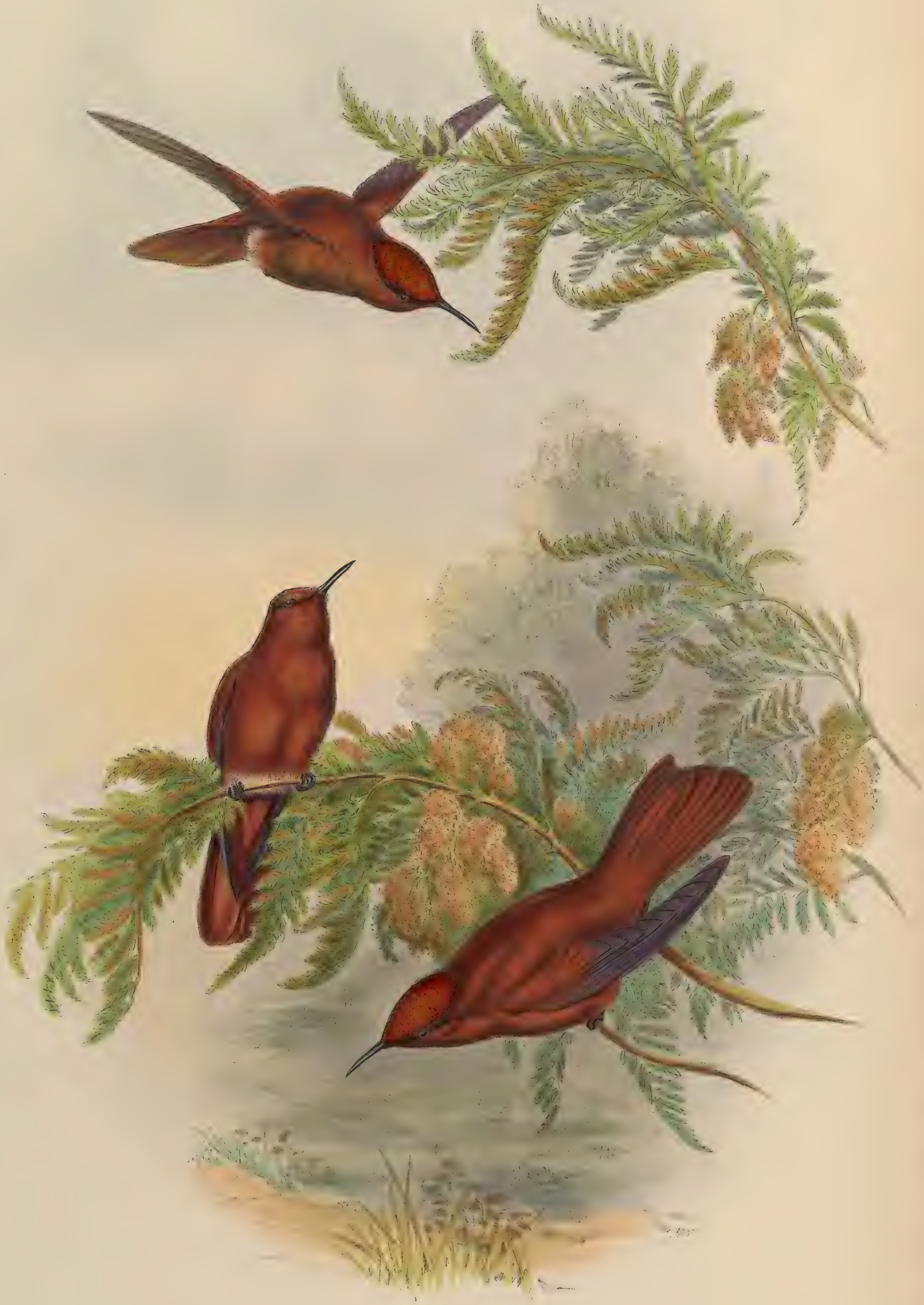
The island of Juan Fernandez is the true and restricted habitat of this beautiful species, the honour of discovering and first describing which is due to Captain P. P. King, R.N., who, in dedicating it to his friend the late Charles Stokes, Esq., was desirous of paying a just tribute of respect to one of the most accomplished men of science, art and literature that has graced society for many years.

Nothing has yet been recorded respecting this or the other Humming Birds inhabiting the island of Juan Fernandez, the extent of which is considerably less than the Isle of Wight, but in which we are told there are many lofty mountains, interspersed with pleasant valleys, clothed with an abundant vegetation. It is in these valleys, and among the shrubby trees close to the sea-shore, that this bird finds a congenial habitat. Mr. Bridges, who has lately returned to Valparaiso, after a short sojourn in this almost *terra incognita*, procured numerous examples, all of which, about thirty in number, have been sent to this country, and submitted to my inspection. Some of them are more richly coloured than others, but all have the metallic green crown; the question then arises, has the female this character as well as the male, or did Mr. Bridges procure males only? One of Captain King's specimens, now in my possession, and which is apparently adult, is destitute of the metallic crown, and has always been regarded by me as a female, but it would seem that this is uncertain; dissection alone then can determine the point.

The only figure of this bird that has yet appeared is the one given by Lesson on the fifth plate of his "Trochilidæ," and of this I would only remark, that a worse or more incorrect representation of it could scarcely have been made.

Crown of the head metallic bluish green; all the upper surface and wing-coverts green with a bronzy lustre; wings purplish brown, the spurious wing glossed with green; two central tail-feathers and the outer webs of the three next on each side grass-green, the inner webs of these lateral feathers white; outer feather white, edged with dusky brown, deepening into green at the tip of the outer web; under surface white, with a spangle of shining green at the tip of each feather of the chin, throat and flanks, the spangles being, in consequence of the smaller size of the feathers, most numerous on the chin and throat; under tail-coverts white with green centres.

The figures are of the natural size. The fern is the *Dicksonia Berteroana*, of Juan Fernandez



EUSTEPHANUS FERNANDENSIS.

J Gould and H.C Richter, del et lith.

Hullmandel & Walton, Imp

EUSTEPHANUS FERNANDENSIS.

Cinnamon Fire Crown.

Trochilus Fernandensis, King in Proc. of Comm. of Sci. and Corr. of Zool. Soc., part i. p. 30.
Ornismya cinnamomea, Gerv. Mag. de Zool., tom. v., Ois. pl. 43.
——— *Robinson*, Less. Ois. Mou. Velins, pl. 7.—De Latt. et Less. Rev. Zool. 1839, p. 18.
Mellisuga Fernandensis, Gray and Mitch. Gen. of Birds, vol. i. p. 113, *Mellisuga*, sp. 95.
Sephanoides fernandensis, Bonap. Consp. Gen. Av., p. 82, *Sephanoides*, sp. 3.—Ib. Consp. Troch. Rev. et Mag. de Zool. 1854, p. 256.

Familiar as is the name of the island of Juan Fernandez to every one, it is not, I believe, generally known, that almost the only feathered inhabitants which enliven this isolated spot are three beautiful species of Humming Birds, viz. *Eustephanus Fernandensis*, *E. Stokesi*, and *E. galeritus*; of these, the present bird is the largest in size, and is moreover rendered peculiarly conspicuous, not only among its immediate congeners, but amidst the entire family, by the uniform cinnamon hue of its plumage, relieved alone by the flame-coloured crown.

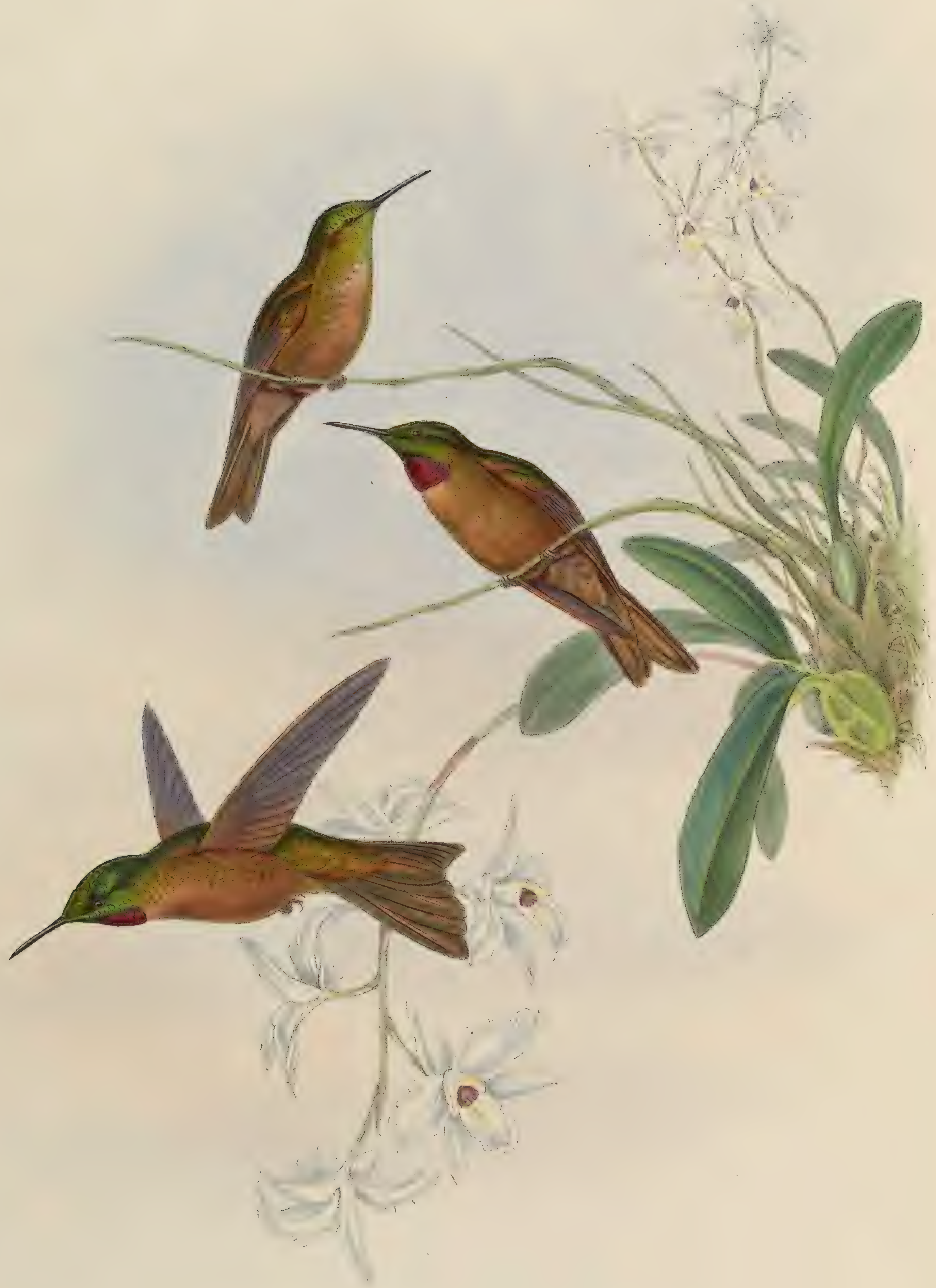
Captain P. P. King, R.N., was the first who brought specimens to Europe, and gave a name to the bird; consequently, the term *Fernandensis*, proposed by him, has the priority over those of *cinnamomea* and *Robinson*, bestowed by the French naturalists Gervais and Lesson.

From about 1825, when Captain King procured his examples, up to the present time, 1854, no additional specimens had been received; Mr. Bridges, however, has recently visited Juan Fernandez, and the result of his explorations is the transmission of thirty fine specimens. These are all precisely alike; are we then to conclude that they are all males, or, that both sexes, when adult, are alike in colour, and the female decorated with the brilliant crown as well as the male? I have seen one specimen in which the brilliant crown was absent, but I had no means of ascertaining whether this was a young male, or a female; judging from analogy, I should have supposed that the females were destitute of this ornament, and if so, all the specimens sent by Mr. Bridges must be males.

Mr. Cuming informs me, that so fearless of man is this fine bird, that a gun is not necessary to procure examples, as it approaches so close that it may be readily killed with a stick.

Forehead and crown metallic fiery red; the entire plumage of the body and the tail-feathers deep cinnamon-red; wing-coverts the same, the lesser ones glossed with green and the greater passing into purple at the tip; spurious wing green; primaries and secondaries purplish brown; vent buffy white; bill black.

The figures represent the bird of the natural size, on the *Thyrsopteris elegans* of Kunze, a tree-fern of the island of Juan Fernandez.



PHAIOLAIMA RUBINOIDES.

J Gould and H C Richter, del et lith.

Hullmandel & Walton Imp

PHAIOLAIMA RUBINOÏDES.

Lilac-throat.

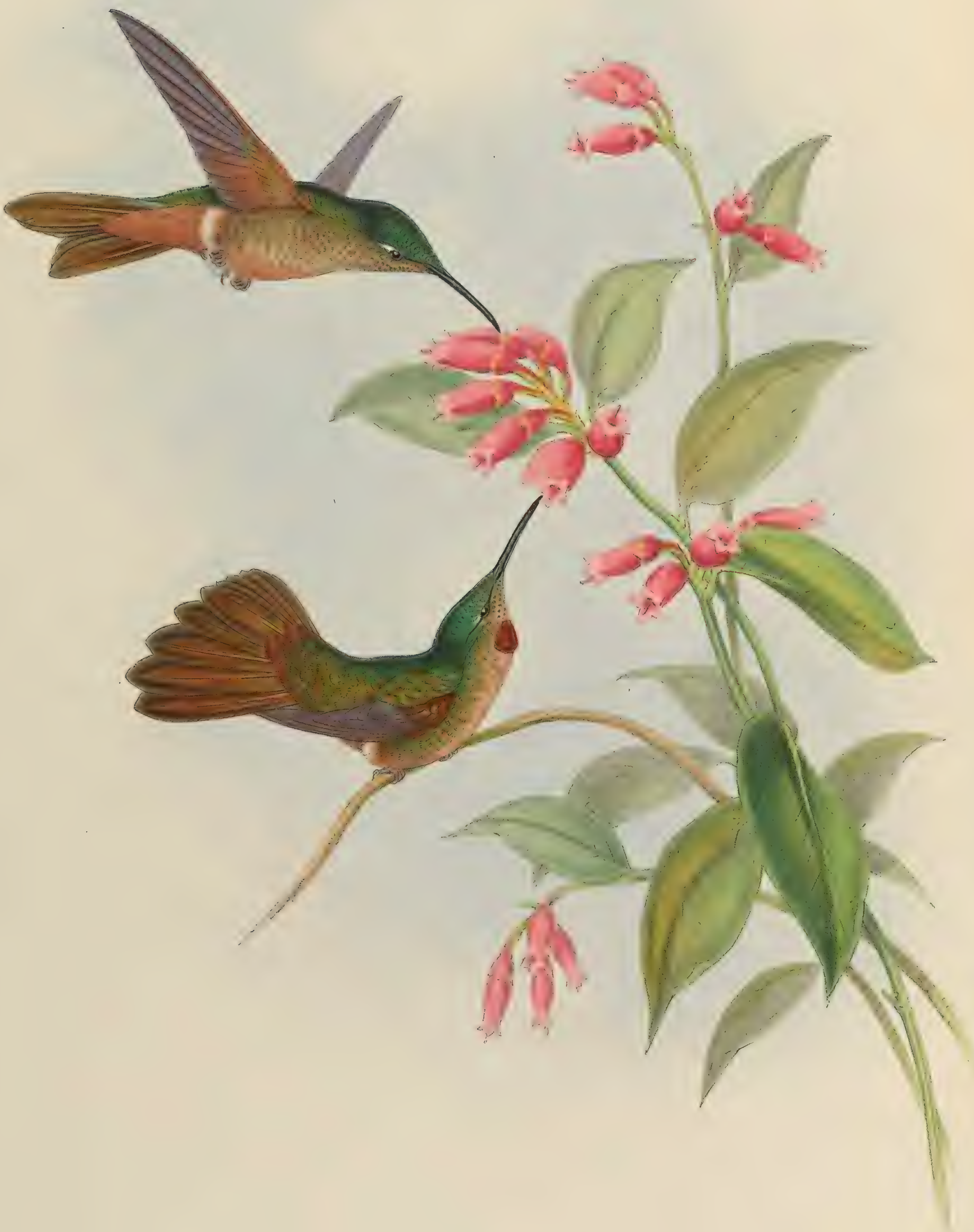
Trochilus rubinoïdes, Bourc. et Muls. Ann. de la Soc. Sci. de Lyon, vol. ix. 1846, p. 322.
Mellisuga rubinoïdes, Gray and Mitch. Gen. of Birds, vol. i. p. 112, *Mellisuga*, sp. 23.
Heliomaster rubinoïdes, Bonap. Consp. Gen. Av., p. 70, *Heliomaster*, sp. 5.
Clytolæma rubinoïdes, Bonap. Rev. et Mag. de Zool. 1854, p. 254.
Phaiolaima rubinoïdes, Reichenb. Aufz. der Colibris, p. 9.

On a close examination I find this species differs considerably both in form and colouring from the *Clytolæma rubinea*, with which it has hitherto been associated; I therefore adopt Dr. Reichenbach's generic appellation of *Phaiolaima* for this and a nearly allied species from Ecuador. These two birds are rendered very conspicuous among the Trochilidæ by the quiet and modest style of their colouring as compared with the *C. rubinea* and other allied species. The tail, as will be seen, is very peculiarly coloured, but harmonizes well both with the buff colouring of the under surface and the metallic pale-lilac-coloured throat-mark.

The *Phaiolaima rubinoïdes* is by no means a common species; and nothing, I regret to say, is known of its habits, or the localities it frequents. It is a native of New Grenada, and individuals now and then occur in collections from Bogota. The metallic throat-mark and brilliant crown are more developed in some specimens than in others, and I have seen examples where both were almost absent; the birds in this state may be females or young males of the year. Few examples in this condition have yet been sent to Europe.

Face, line down the crown, and sides of the head luminous green; on the throat a patch of metallic lilac; sides of the head and upper surface bronzy green, the bronzy hue predominating on the wing-coverts, lower part of the back and upper tail-coverts; wings purplish brown, edged on the shoulder and outer quill with deep buff; tail pure bronze, with deep buff shafts; under surface buff, washed with green on the flanks.

The figures are of the size of life. The plant is the *Lælia acuminata*.



PHAIOLAIMA ÆQUATORIALIS, *Gould.*

J. Gould and H. C. Richter, del et lith.
Hullmandel & Walton, Imp.

PHAIOLAIMA ÆQUATORIALIS, *Gould.*

Equatorial Lilac-throat.

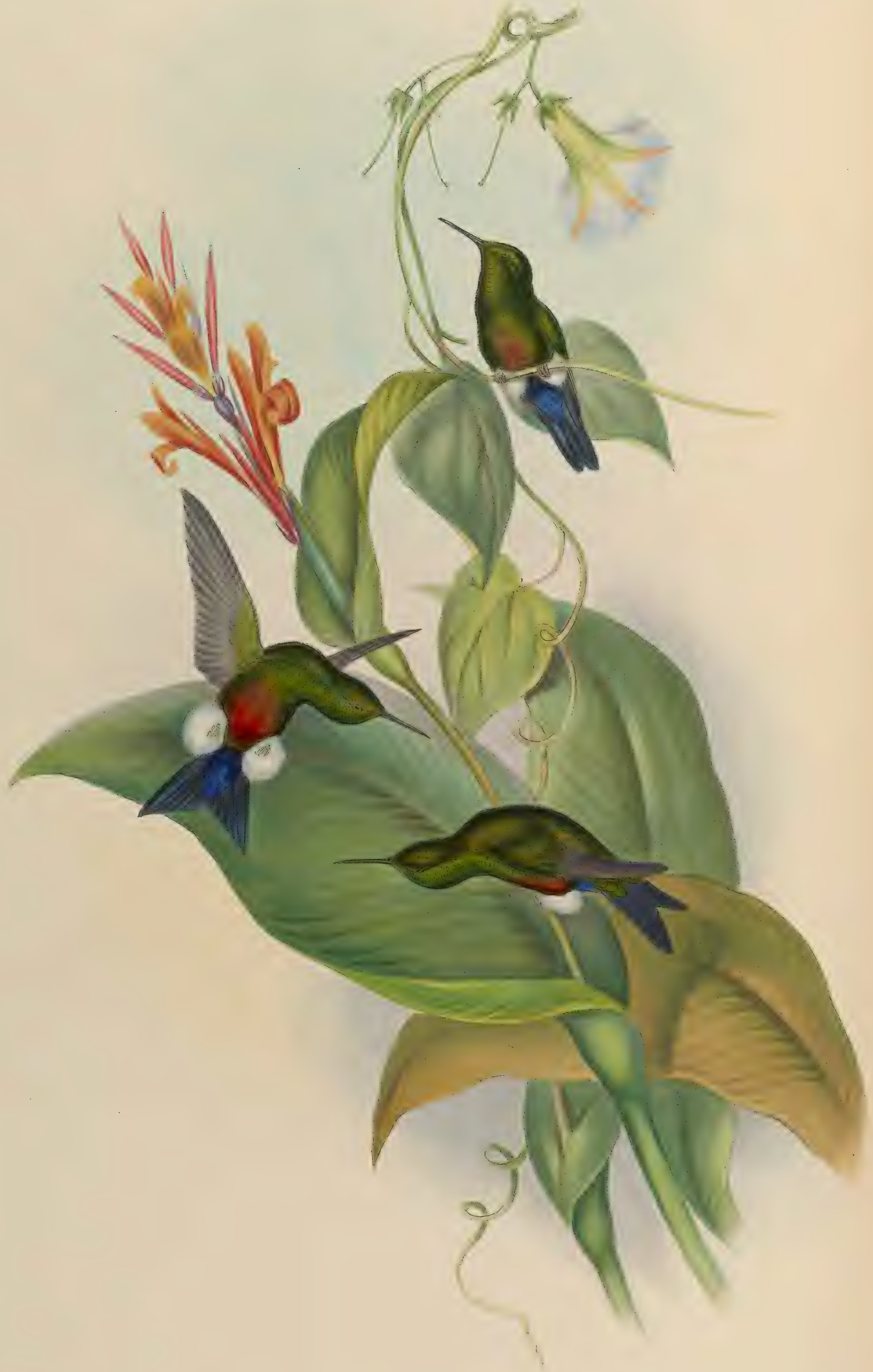
Phæolæma rubinoïdes, Sclat. in Proc. Zool. Soc., part xxvii. p. 145.
——— *æquatorialis*, Gould, Sclat. in Proc. Zool. Soc., part xxviii. p. 70.

I HAVE for many years been aware of the existence of a second species of *Phaiolaima*, M. Bourcier having pointed it out soon after his return from Ecuador, and assigned to me the privilege of giving it a name, which I have neglected to do until the present year, 1860. Besides the examples procured in Ecuador which grace M. Bourcier's collection, I have received others from Quito, and I have three more which were collected at Pallatanga by Mr. Fraser, from whose notes we learn that the bill is black, the irides hazel, and the legs and feet dark flesh-colour. Ecuador, then, is evidently the true habitat of this fine species—a species which is nearly allied to, but quite distinct from, the *Phaiolaima rubinoïdes* of Santa Fé de Bogota. It is not only distinguished from its northern ally by its greater size, but also by the total absence of any glittering feathers on the crown, which are always present in *P. rubinoïdes*; the luminous lilac patch on the throat, too, is not so extensive; neither is it so brilliant. A peculiar style of colouring pervades both species, by which they are distinguished from all other Humming-Birds,—a character which cannot be rendered very clear by description, but which is readily perceptible on reference to the plates in which they are depicted; they have indeed a sombre-brown look quite peculiar to themselves.

The sexes probably do not differ in colouring. It is true that I have seen examples without the luminous throat-mark, which might be supposed to be females; but as they offer no other difference in their colouring or markings, I am induced to believe them to be young birds.

Crown of the head, face, sides of the neck, and chin pure green; on the centre of the throat a small patch of pale metallic lilac; all the upper surface bronzy green, the bronzy hue predominating on the wing- and tail-coverts; wings purplish brown, edged on the shoulders and outer primary with deep buff; tail pure bronze with deep buff shafts; under surface buff, washed with green on the flanks.

The figures are of the natural size. The Plant is *Thibaudia Pichinchensis.*



ERIOCNEMIS CUPREIVENTRIS.

J. Gould and I.

Hullmandel & Walton Imp.

ERIOCNEMIS CUPREIVENTRIS.

Coppery-bellied Puff-leg.

Trochilus cupreiventris, Fras. in Proc. Zool. Soc., Part viii. p. 40.
Ornismya vestita ♀, Longuem., Less. in Rev. Zool. 1838, p. 314 ?
——— *maniculata*, Less. ?
Hylocharis cupreoventris, Gray and Mitch. Gen. of Birds, vol. i. p. 114, *Hylocharis*, sp. 3.
Eriopus cupreiventris, Bonap. Consp. Gen. Av., p. 80, *Eriopus*, sp. 3.

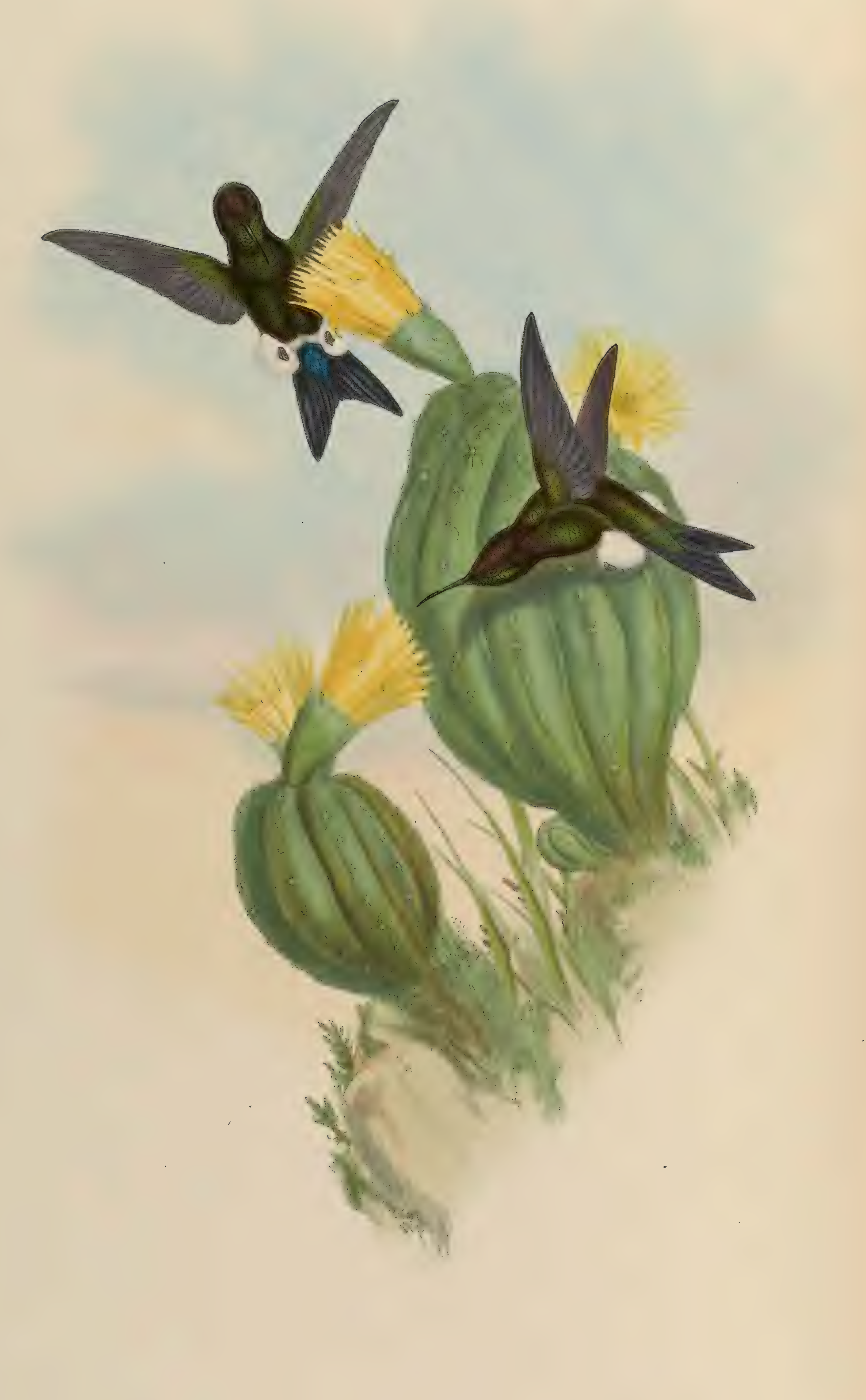
The great beauty of the *Eriocnemis cupreiventris*, and the large size of the white tufts clothing its legs, rendering it a very conspicuous object, it is much sought after by collectors; and, judging from the great number of specimens sent to Europe from Santa Fé de Bogota, it would seem to be one of the most abundant of the Humming-birds inhabiting that country.

It evinces a preference for the temperate regions lying at an elevation of from six to nine thousand feet, and appears never to visit the colder districts above or the warmer valleys below. From the circumstance of no examples occurring in collections from any other part of South America than Columbia, it would seem that its range is of limited extent.

The sexes are very much alike, and both have the white muff-like decoration on the leg, but it is not so much developed in the female as in the male; the young is also very similar, but differs in having the throat dull brownish black instead of luminous green.

The male has the crown of the head, sides of the neck, back and wing-coverts bronzy green, passing into bright shining green on the upper tail-coverts; wings purplish brown; tail purplish black; throat shining green; under surface golden green, passing into a rich coppery hue on the abdomen; leg-ruffs snow-white; under tail-coverts rich shining lazuline blue; bill black; feet brown.

The figures are of the size of life.



ERIOCNEMIS SIMPLEX (Gould)

J. Gould and H. C. Richter, del et lith.

Hullmandel & Walton, Imp.

ERIOCNEMIS SIMPLEX, *Gould.*

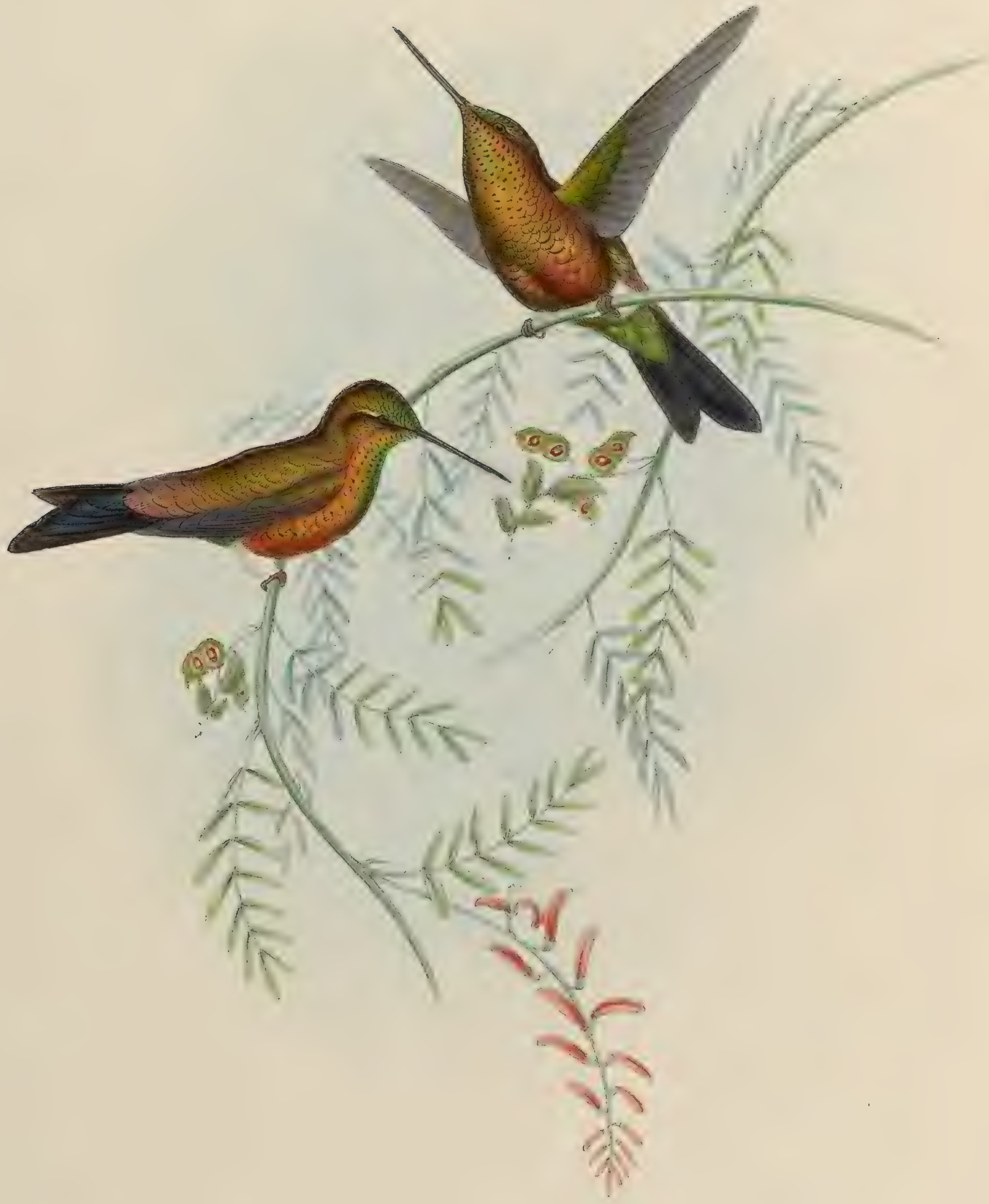
Olive-coloured Puff-leg.

Eriopus simplex, Gould in Proc. of Zool. Soc., 1849, p. 96.

The single specimen of this bird forming part of the collection of Edward Wilson, Esq., is the only one that has yet been sent to Europe. It was received direct from Santa Fé de Bogota, accompanied by other new and rare species, which induces a belief that it had been procured in some district not previously visited by collectors. Mr. Wilson, with his usual liberality, kindly lent me the specimen for the purpose of describing and figuring it, if requisite. During the three years it has been in my possession, I have frequently examined and carefully compared it with *Eriocnemis cupreiventris,* under the impression that it might possibly be merely a singular variety of that bird, but I have always returned to my original opinion, that it is a distinct species, and have therefore figured it as such on the accompanying Plate.

The colouring of the entire body is a nearly uniform dark olive-green, with a rufous tinge on the upper surface; the crown of the head and back of the neck tinted with purple; the rump and upper tail-coverts a very little brighter than the back; on the throat, a patch of scale-like feathers of a more glossy green than the other part of the under surface; wings purplish brown; tail black with purplish reflexions; thighs and tarsi thickly clothed with snow-white plumes, presenting a strong contrast to the dark colouring of the body; under tail-coverts dull bluish purple; bill and feet black.

The figures are of the natural size; the *Cactus* is a species common on the Columbian Andes.



ERIOCNEMIS ISAACSONI.

J Gould and H C Richter, del. et lith

Hullmandel & Walton, Imp

ERIOCNEMIS ISAACSONI.

Long-billed Puff-leg.

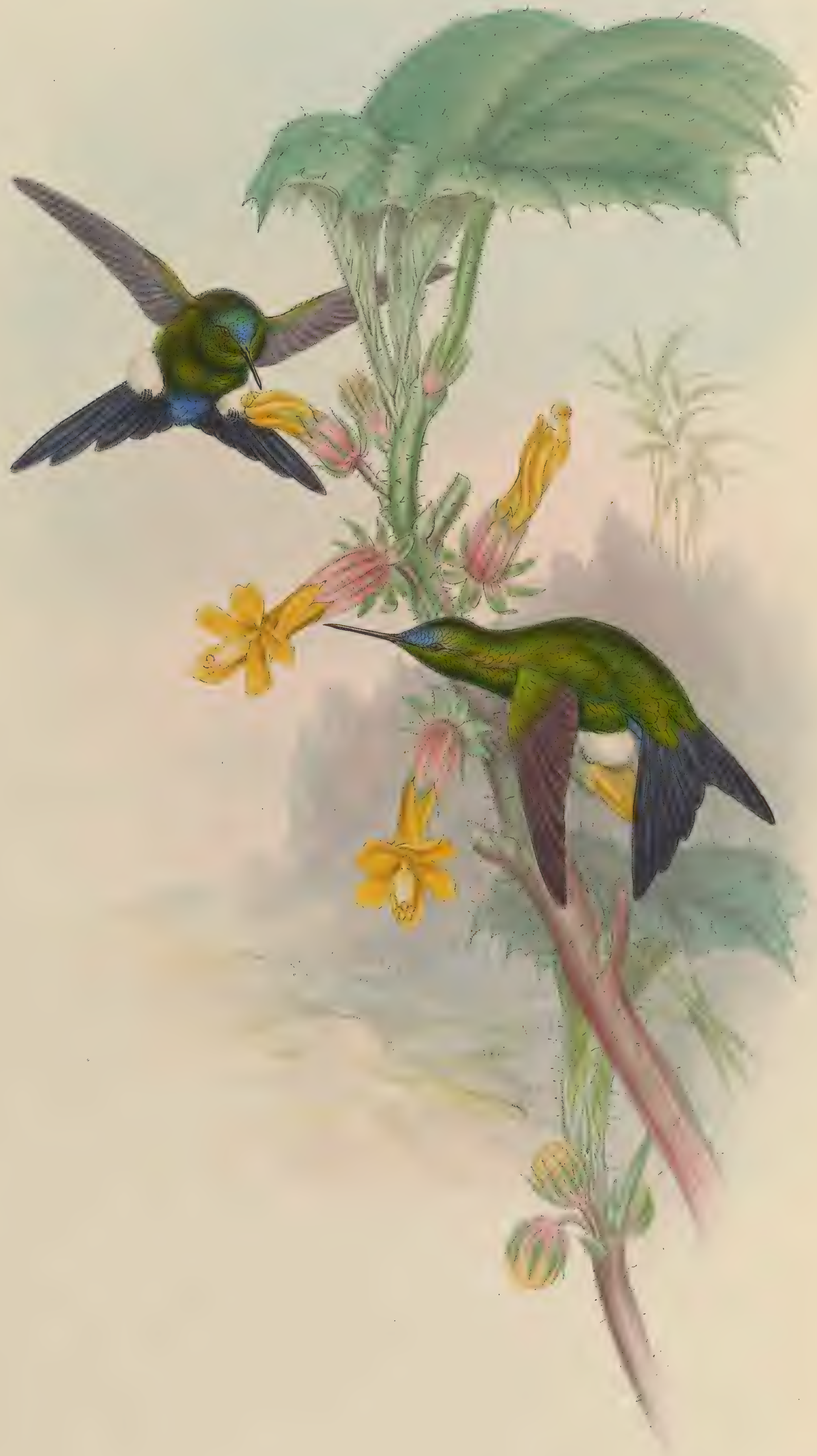
Ornysmia Isaacsonii, Parz. Rev. Zool. 1845, p. 95.
Hylocharis Isaacsoni, Gray and Mitch. Gen. of Birds, vol. i. p. 114, *Hylocharis*, sp. 9.
Eriopus isaacsoni, Bonap. Consp. Gen. Av., p. 80, *Eriopus*, sp. 9.
Eriocnemys isaacsoni, Bonap. Rev. et Mag. de Zool. 1854, p. 252.
Phemonoë Isaacsoni, Reichenb. Aufz. der Colibris, p. 9.

Up to the present time only a single example of this species has reached Europe. The specimen referred to was received by M. Parzudaki of Paris in a large collection of birds from Santa Fé de Bogota, in examining which, it did not escape the discriminating eye of that well-known naturalist. It subsequently passed into the hands of the late Earl of Derby, and now forms part of the great Collection at Liverpool. It received its specific appellation from M. Parzudaki, and I quite agree with him in considering it distinct from every other known member of the genus. Its nearest ally is the *E. cupreiventris*, from which, however, it differs in its much longer bill, in the more coppery hue of its upper surface, and in the green colouring of its under tail-coverts. Although received direct from Bogota, that locality is doubtless not its true habitat, for if it were, we should certainly have received other examples during the thirteen years which have elapsed since it was first characterized.

My thanks are due to the Trustees of the Derby Museum, for the loan of their unique specimen for the purpose of examination, and permission to figure it in the present work.

Head and back dull greenish bronze; upper tail-coverts purplish; throat shining green, passing into rich golden bronze on the sides of the neck, abdomen and flanks; wings purplish brown; tail brownish black; under tail-coverts shining green; thighs clothed with white down-like feathers.

The figures are of the natural size.



ERIOCNEMIS LUCIANI.

J. Gould and H. C. Richter, del et lith. Hullmandel & Walton

ERIOCNEMIS LUCIANI.

Buquet's Puff-leg.

Trochilus Luciani, Bourc. Ann. Sci. et Phys. de Lyon, 1847, p. 624.
Hylocharis Luciani, Gray and Mitch. Gen. of Birds, vol. i. p. 114, *Hylocharis,* sp. 4.
Eriopus luciani, Bonap. Consp. Gen. Av., p. 80, *Eriopus,* sp. 4.
T. (*Eriopus*) *luciani,* Jard. Cont. to Orn., 1850, p. 2.

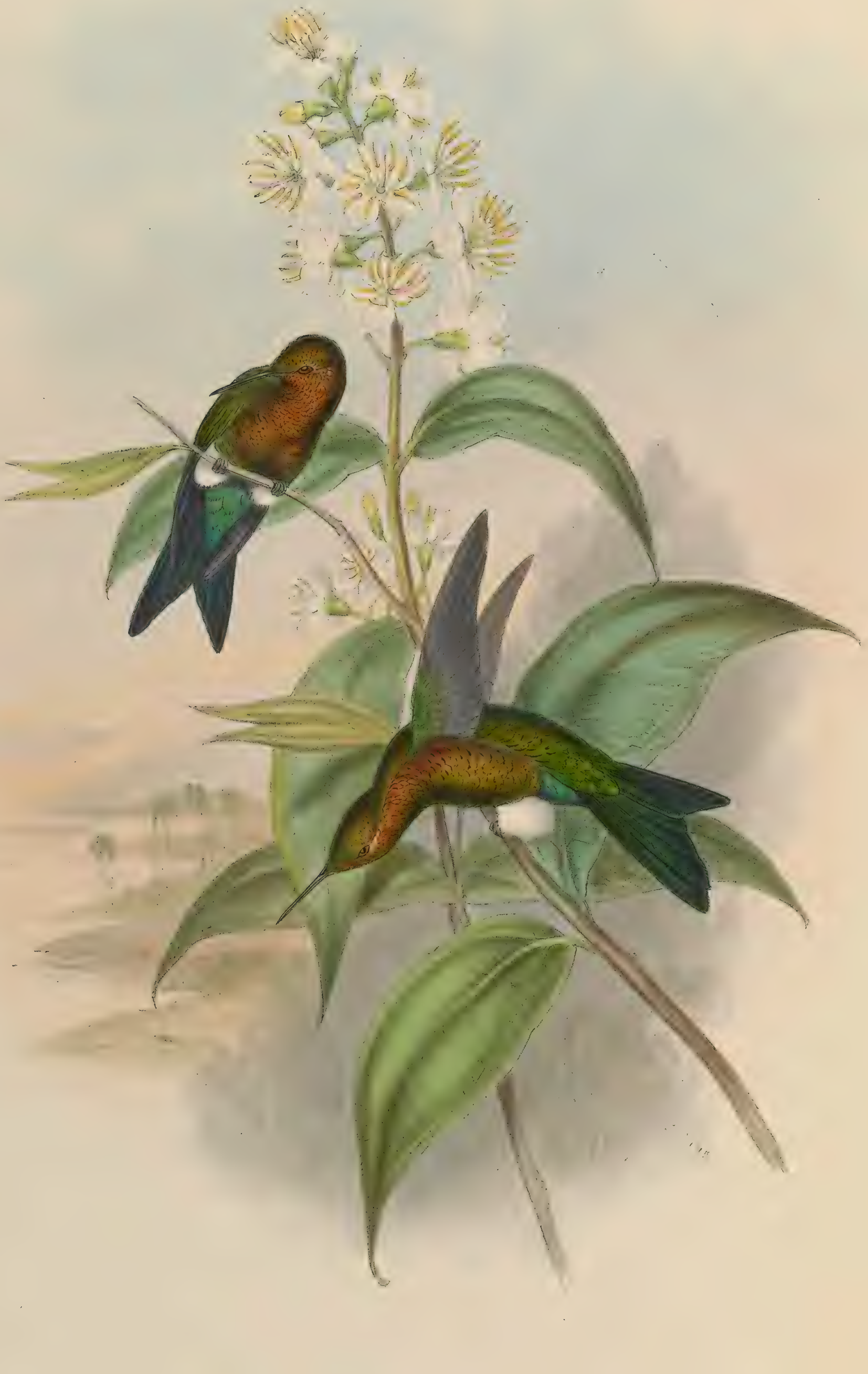
This species was originally characterized by M. Bourcier in 1847, from a single specimen procured by M. De Lattre near the village of Guaca in the Republic of Ecuador. Since that period the bird has become tolerably common in our collections, many specimens having been obtained by M. Bourcier during his late sojourn in that country. For the examples contained in Sir William Jardine's collection and in my own, we are indebted to Professor Jameson of Quito, who states that the bird is very common on the western side of Pichincha, at an elevation of from ten to twelve thousand feet.

The sexes of *E. Luciani,* like those of *E. Mosquera* and *E. cupreiventris,* are so similar as scarcely to be distinguished by their colouring; both have the white ruffs, but as usual these ornaments are less developed in the female. The young birds of the first year may be distinguished by the green hue of the throat being entirely absent, that part being clothed by feathers of a nearly uniform blackish brown, without any metallic brilliancy; as the bird advances in age, a line of luminous green feathers extends down the middle of the throat. On the forehead of some adults a brilliant bluish green mark is found, while in others it is totally absent: probably this difference is due to the more or less approach to maturity.

M. Bourcier has named this species *Luciani,* in honour of M. Lucien Buquet, one of the most distinguished entomologists of France.

Forehead shining bluish green; crown of the head, upper surface, upper and under wing-coverts bronzy green, passing into shining green on the upper tail-coverts; wings purplish brown; tail purplish black; all the under surface lustrous golden green; under tail-coverts rich blue; thigh-ruffs snow-white; bill black; feet brown.

The figures represent the two sexes of the size of life.



ERIOCNEMIS MOSQUERA.

J. Gould and H. C. Richter, del. et lith. Hullmandel & Walton Imp.

ERIOCNEMIS MOSQUERA.

Mosquera's Puff-leg.

Trochilus Mosquera, Bourc. et De Latt. Rev. Zool. 1846, p. 306.
Hylocharis mosquera, Gray and Mitch. Gen. of Birds, vol. i. p. 114, *Hylocharis,* sp. 5.
Eriopus mosquera, Bonap. Consp. Gen. Av., p. 80, *Eriopus,* sp. 5.

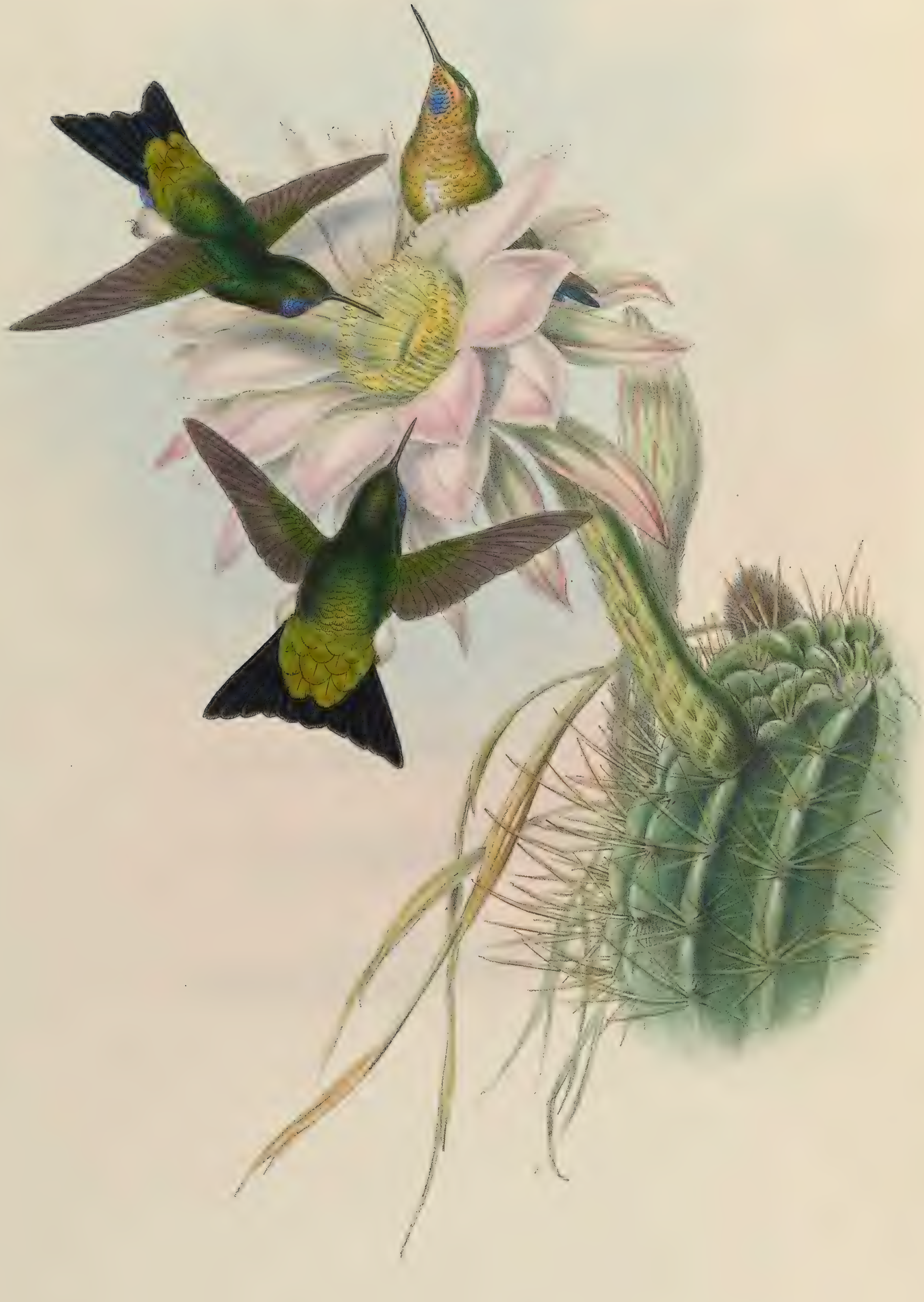
It is only of late years that any species of this singular genus has been discovered; only in fact since the higher Andes have been visited by European collectors, and their attention called to the rich productions which there abound. For the discovery of the present bird we are indebted to M. De Lattre, who procured it at Pasto in New Grenada, and who in conjunction with his friend M. Bourcier named it *Mosquera,* in honour of General Mosquera, President of the Republic of New Grenada, a distinguished patron of science and natural history.

In its rich golden colours it differs from every other species of the group to which it belongs, and particularly from *E. Luciani* and *E. cupreiventris,* but at the same time it is more intimately allied to those species than to any others.

After examining numerous specimens of both sexes, I find but little difference in their colouring; as MM. Bourcier and De Lattre state, the female has a somewhat darker tail and the ruffs on the legs less developed.

General plumage golden green, becoming of a purer green on the wing-coverts, back and rump, and passing again into luminous golden green on the extremities of the tail-coverts; wings purplish brown; four central tail-feathers green; the next on each side olive on the inner web, green on the outer, the next olive, with a wash of green along the outer web and at the tip; the outer one olive, with a tinge of green at the tip only; under surface golden, becoming very bright on the throat and passing into green on the centre of the abdomen; under tail-coverts green; thighs thickly clothed with white down; bill blackish brown; under mandible lighter than the upper, or inclining to flesh-colour; feet dark brown.

The figures represent the two sexes of the size of life.



ERIOCNEMIS VESTITUS.

J. Gould and H. C. Richter, del. et lith.

Hullmandel & Walton, Imp.

ERIOCNEMIS VESTITUS.

Glowing Puff-leg.

Ornismya vestita, Longuem. Rev. Zool. 1838, p. 314.—De Latt. et Bourc. Rev. Zool. 1839, p. 18, and 1840, p. 8.
Trochilus uropygialis, Fras. in Proc. of Zool. Soc., part viii. p. 15.
Ornismya glomata, Less. Echo du Monde Savant.
Hylocharis vestita, Gray and Mitch. Gen. of Birds, vol. i. p. 114, *Hylocharis,* sp. 2.
Eriopus vestita, Bonap. Consp. Gen. Av., p. 80, *Eriopus,* sp. 1.
Eriocnemis vestita, Reich. Auf. der Col., p. 9.
Eriocnemys vestitus, Bonap. Rev. Zool. 1854, p. 252.

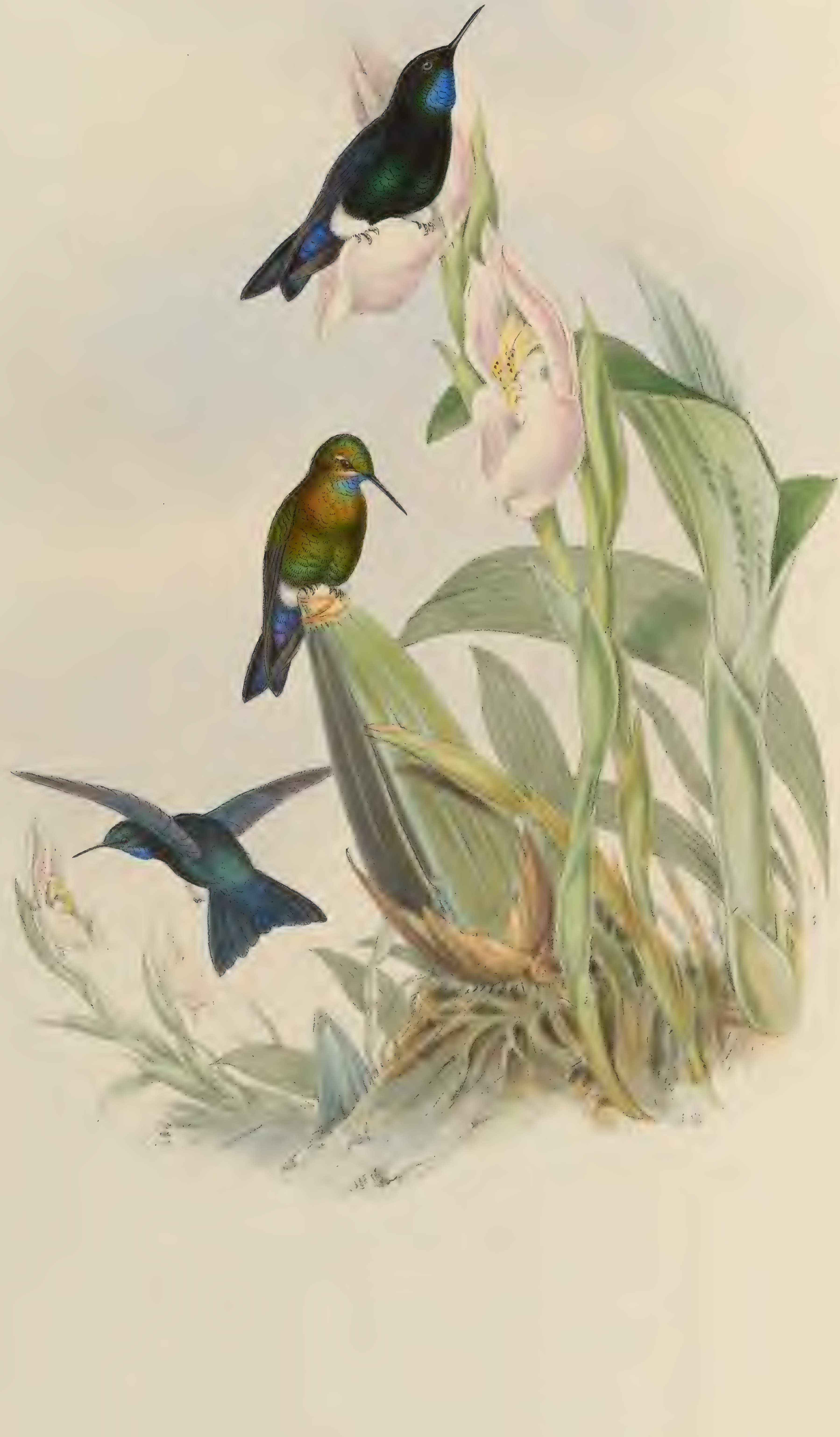
It is to be regretted that some more appropriate term than *vestitus* had not been selected as the specific designation of this wonderful little bird—I say wonderful advisedly; for every one who, for the first time, finds himself in front of the compartment in my collection in which this species is placed, gives utterance to some exclamation expressive of the admiration excited by its striking beauty and the glow-worm like splendour of its upper tail-coverts. This brilliancy is more apparent at certain hours of the day; for instance, it is more beautiful in the evening after sunset than at mid-day, the brilliancy being then more strikingly contrasted and relieved by the dark hue of the tail-feathers. It is unquestionably one of the finest species of its genus, and one of the most resplendent of the *Trochilidæ*: would that it were possible for me even faintly to depict it! but no, the most finished drawing can be but a phantom of the original, and it is only by an examination of specimens that my readers can form any adequate idea of the splendour and beauty of this gem; and how much more gorgeous must the bird appear in its native wilds! But a short period has elapsed since we first became aware of the existence of this lovely bird; twenty-five years ago it was totally unknown; during the quarter of a century ending with 1859 it has, however, become extremely common, so much so, indeed, that no collection need be without the richest examples: its market value is very small, and thousands upon thousands have already found their way to Europe. Its native country is Columbia, and it is nowhere more abundant than in the neighbourhood of Santa Fé de Bogota: it is within an area of 100 miles from this place that not only this, but a host of other species of Humming-birds have been procured. Its large snow-white boots must render the bird a very conspicuous object both when flying and when at rest, for it surely cannot conceal these lengthened tufts of feathers even if so disposed. The female is not so gorgeously attired as the male, neither are her leg-tufts so conspicuous; still she is far from being destitute of beauty.

The male has the head, throat, neck, upper part of the back, and wing-coverts deep bronzy green; centre of the back purer green; lower part of the back and upper tail-coverts yellowish green, of the most intense metallic brilliancy; wings purplish brown; tail bluish black; a circular spot on the chin and under tail-coverts deep rich metallic blue; abdomen and flanks glittering golden green; thighs thickly clothed with white downy feathers; bill black; feet brown.

On looking at the bird in front, the head and neck appear to be of a deep black; but on changing the position, those parts are found to be of the colour described.

The female has a similar distribution of colour, but the hues are altogether less brilliant; the central tail-feathers are green instead of bluish black; the upper tail-coverts are not so much developed; there is only an indication of the blue spot on the throat; the under surface assumes a rusty tint, and the feathers are merely tipped, or spangled with the brilliant hue so conspicuous in the male; and the blue under tail-feathers are less developed.

The Plate represents two males and a female of the natural size. The plant is the *Echinopsis cristata.*



ERIOCNEMIS NIGRIVESTIS.

J. Gould and H. C. Richter, del. et lith.

Hullmandel & Walton, Imp.

ERIOCNEMIS NIGRIVESTIS.

Black-breasted Puff-leg.

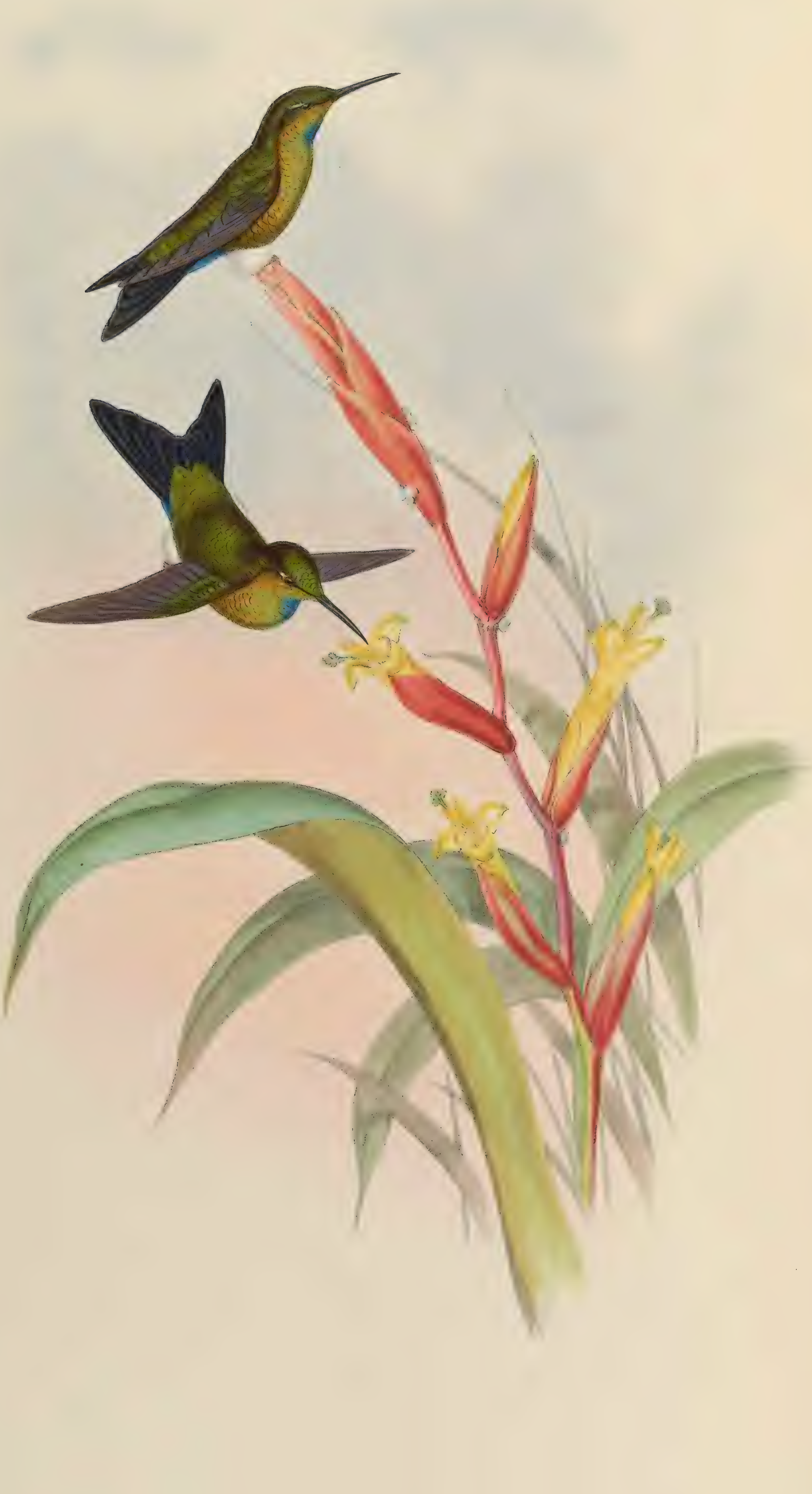
Trochilus nigrivestis, Bourc. et Muls. Ann. de la Soc. Sci. de Lyon, 1852, p. .
Eriocnemys nigrivestis, Bonap. Rev. et Mag. de Zool. 1854, p. 252.
Eriocnemis nigriventris, Reichenb. Aufz. der Col., p. 9.
? *vestinigra*, Verr. MS. ?

One of the greatest enjoyments experienced by the naturalist is doubtless that of exploring countries hitherto untrodden by the scientific man, where, ever and anon, an object is presented to his notice which has never before been seen; under such circumstances time passes quickly—the mind is at ease, or merely tempered with sufficient excitement to favour good health and an exuberance of spirits; and second only to this pleasure is that of receiving communications and collections from correspondents in far distant countries. In one of the numerous letters received from my friend Professor Jameson, of Quito, a gentleman who has so largely contributed to our knowledge of the natural productions of the primeval forests of Ecuador, occurs the following passage:—"There is one species of Humming-bird which I am particularly desirous of procuring for you. It is an inhabitant of the upper boundary of the forest, and is as *black as charcoal, with white boots*. Should I have the good luck to obtain a specimen, it shall be immediately sent off to your address." Feeling assured that such a bird was new to science, I replied immediately, urgently pressing my friend to procure and forward it; and at length the subject of the present Plate was transmitted to me. On examination it did not quite agree with Professor Jameson's description, but it is doubtless the bird he referred to, as it would appear coal-black when flying at a distance. M. Bourcier of Paris, however, had the gratification of first receiving the species through another channel, and from another part of the country, the environs of Tumbaro. By this gentleman it was named *nigrivestis*, "dressed in black." It is in every respect a typical member of the genus, and is most nearly allied to *E. vestita*.

The general plumage of the male is black, with green reflexions, relieved on the throat by a patch of deep blue, bordered in some instances with minute glittering green feathers; lower part of the back inclining to deep grass-green; wings blackish purple; upper tail-coverts dull indigo-blue; tail deep bluish black; under tail-coverts lazuline blue; legs clothed with white down-like feathers; bill black.

The general plumage of the female is greenish bronze, becoming of a purer and more shining green on the upper tail-coverts and lower part of the abdomen; wings, tail and under tail-coverts as in the male; breast coppery green, with a patch of greenish blue on the throat; from the angle of the bill a small moustache of buffy white.

Through the kindness of Professor Jameson, I am enabled to figure both sexes, of the natural size, on one of the fine Orchids of the country, the *Anguloa uniflora*.



ERIOCNEMIS GODINI.

J. Gould and H. C. Richter, del. et lith.

Hullmandel & Walton Imp.

ERIOCNEMIS GODINI.

Godin's Puff-leg.

Trochilus Godini, Bourc. Compt. Rend. de l'Acad. des Sci., tom. xxxii. p. 186.
Eriocnemys godini, Bonap. Rev. et Mag. de Zool. 1854, p. 252.
Eriocnemis Godini, Reich. Auf. der Col., p. 9.—Ib. Troch. Enum., p. 6.

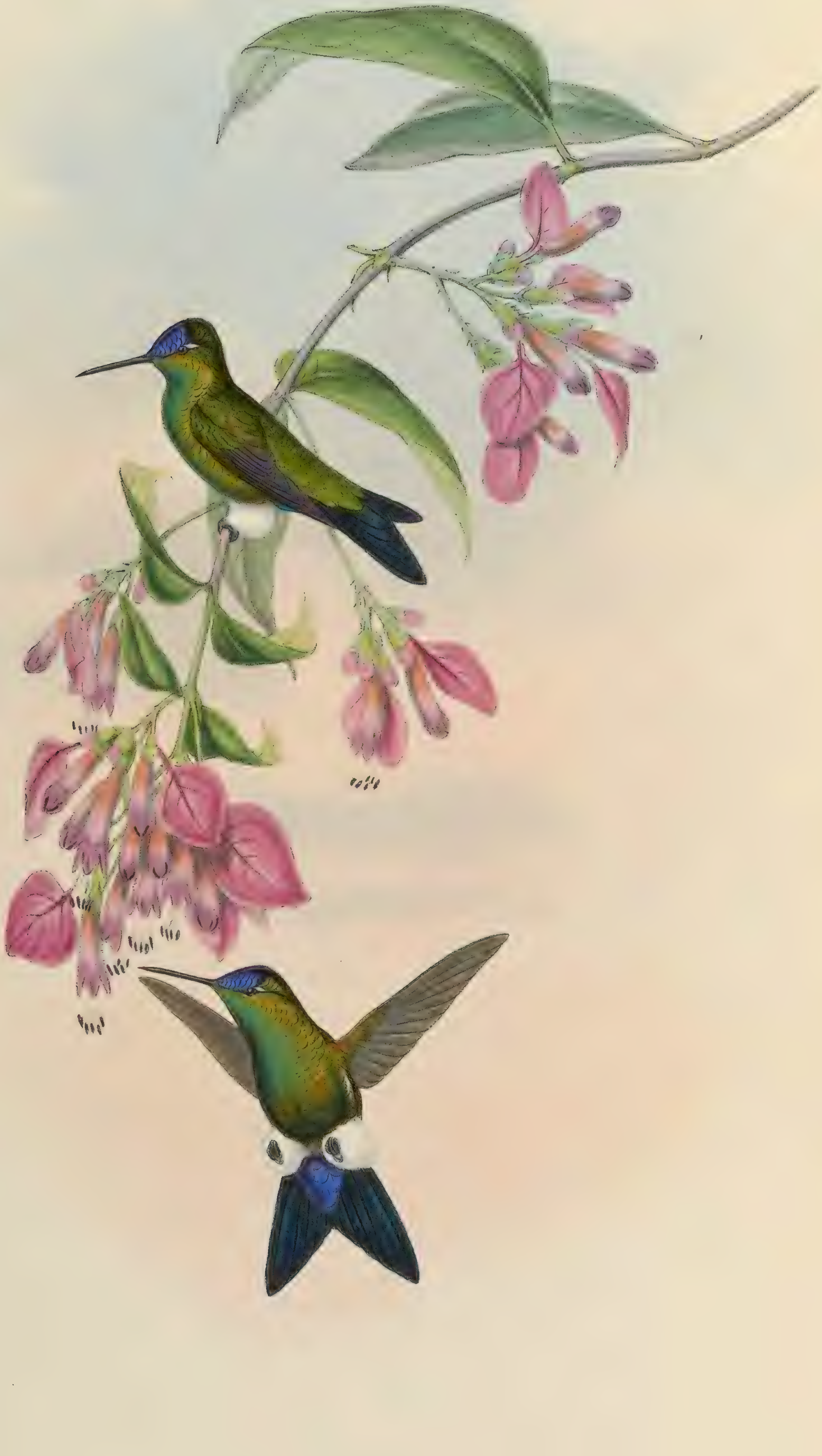
This species, although in every sense a true *Eriocnemis,* differs widely from all the other members of the genus: in size it exceeds the *E. vestitus,* and moreover differs from that species in its longer and more decidedly forked tail, and in the luminous feathers of the lower part of the back being of a more grassy and much less brilliant green; the whole of the under surface of the *E. Godini,* too, is of a rich glittering bronzy green, with the bronzy hue predominating and becoming still more coppery on the abdomen; the green of the throat also is interrupted by a small patch of blue, which I suspect is more conspicuous in some specimens than in the one from which my figure was taken.

The native country of the *Eriocnemis Godini* is Ecuador, where it was procured by M. Bourcier, to whom I am indebted for the loan of his type specimen for the purpose of figuring it in the present work. It will be seen that this is only one of many instances in which I have had to record my obligations to this gentleman for the liberality with which he has seconded my efforts towards the elucidation of the natural history of this lovely group of birds.

Head, upper part of the back, and wing-coverts bronzy green; lower part of the back and upper tail-coverts shining grass-green; wings purplish brown; tail black with steel-blue reflexions; throat and upper surface bronzy green, gradually deepening into rich bronze on the abdomen; on the centre of the throat a small patch of blue; tarsi thickly clothed with white feathers; under tail-coverts fine blue; bill black; feet blackish brown.

The female is at present unknown.

The figures are of the natural size. The plant is the *Vriesia psittacina,* var. *rubro-bracteata.*



ERIOCNEMIS D'ORBIGNYI.

J. Gould and H. C. Richter, del. et lith.

Walter & Cohn, Imp.

ERIOCNEMIS D'ORBIGNYI.

D'Orbigny's Puff-leg.

Trochilus D'Orbignyi, Bourc. et Muls. in Ann. Soc. Sci. de Lyon, 1846, p. 315.
Phemonoë D'Orbignyi, Reichenb. Aufz. der Col., p. 9.
Eriocnemis D'Orbignyi, Reichenb. Troch. Enum., p. 6, pl. 741. fig. 4697.
Eriocnemys orbignyi, Bonap. in Rev. et Mag. de Zool. 1854, p. 252.
Hylocharis D'Orbignyi, Gray and Mitch. Gen. of Birds, vol. i. p. 114, *Hylocharis,* sp. 10.

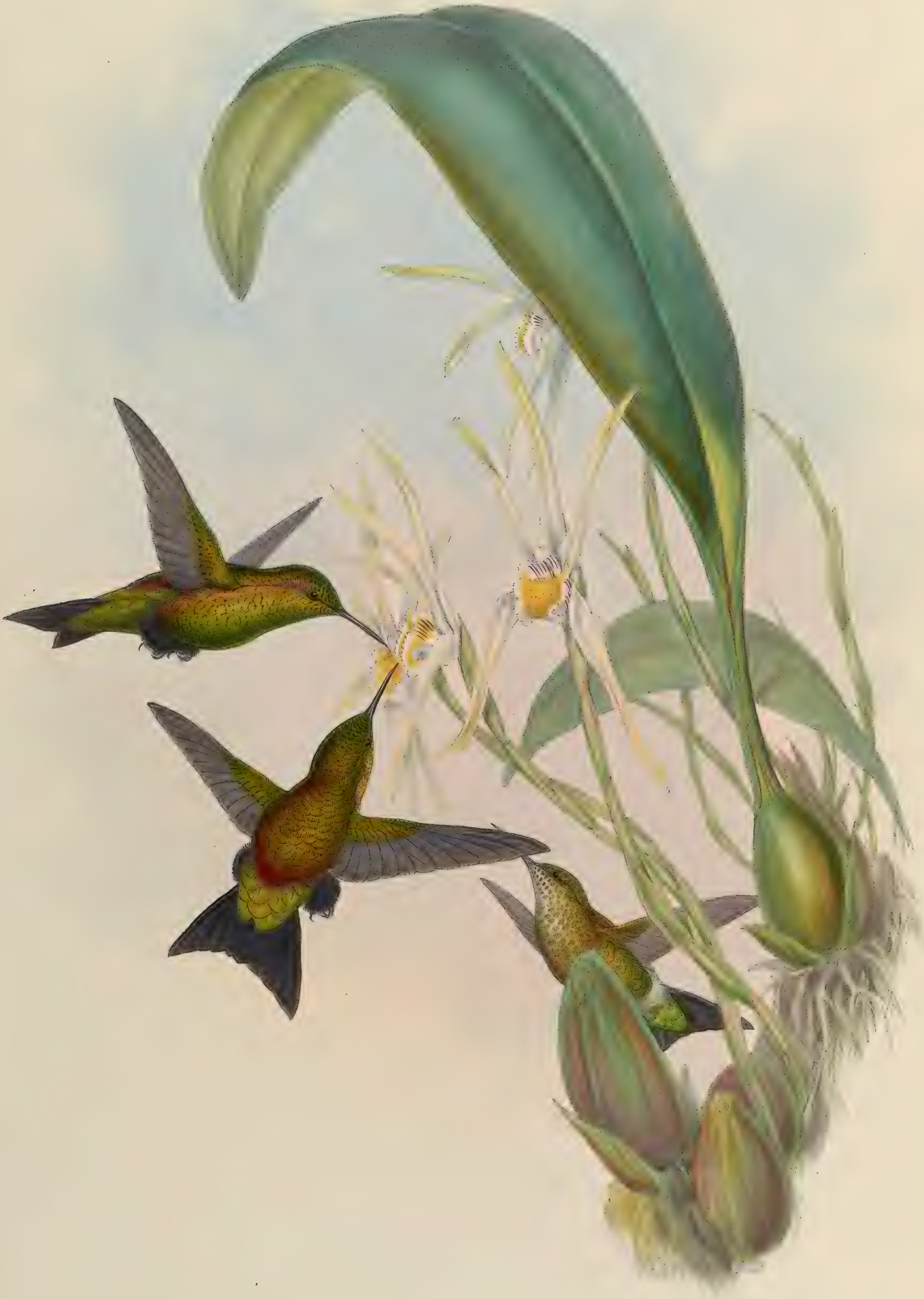
A SINGLE specimen (apparently an adult male) of this bird graces the collection in the Museum of the Jardin des Plantes, at Paris. This individual was, I believe, brought to Europe by M. D'Orbigny, and was procured either in Peru or Bolivia. The *Eriocnemis D'Orbignyi* differs from all the other species of the genus I have yet seen, in the possession of a blue frontlet; in size it is very similar to *E. vestita,* from which, however, as well as from all the others, it differs in several well-marked specific particulars.

The unique specimen contained in the Paris Museum serves to show how little acquainted we are with the Humming-Birds of the countries to the southward of Ecuador. That both Peru and Bolivia possess many species as yet unknown, there seems to be but little doubt.

The following is a description of this bird taken from the Paris specimen :—

Forehead violet blue; all the upper surface uniform bronzy grass-green; throat and under surface glittering golden green, inclining to blue on the centre of the throat and chest; tail steel or bluish black.

The figures are of the size of life. The plant is the *Howardia Caracasensis.*



ERIOCNEMIS DERBIANUS.

J. Gould and H.C Richter, del. et lith

Hullmandel & Walton Imp

ERIOCNEMIS DERBIANUS.

Derby's Puff-leg.

Trochilus Derbyi, De Latt. et Bourc. Rev. Zool. 1846, p. 306.
Eriopus Derbyi, Gould in Proc. of Zool. Soc., part xv. p. 17.
——— *derbyi*, Bonap. Consp. Gen. Av., p. 80, *Eriopus*, sp. 7.
Eriocnemys derbyanus, Bonap. Rev. et Mag. de Zool. 1854, p. 252.
Threptia Derbyi, Reichenb. Aufz. der Colibris, p. 9.

That the study of the great family of the Trochilidæ, when all the species are known and the areas of habitat enjoyed by each are ascertained, will tend to throw some light on what may or may not be termed species, I think there can be little doubt. The various members of the genera *Oreotrochilus*, *Oxypogon* and *Ramphomicron* live at elevations varying from 10,000 to 16,000 feet, and are confined to such limited areas, that a single cone like that of Chimborazo or Cotopaxi is the extent of their range; on the other hand, many of the extinct volcanos have species peculiar to the shrubby regions on their inner sides. Surely such facts as these are worthy of a greater share of the attention of philosophers than has hitherto been devoted to them. The bird figured on the accompanying Plate serves well to illustrate the foregoing passage, for up to the present time it is only known to inhabit the extinct volcano of Puracé, where it was discovered by the late M. De Lattre during his travels in the little-trodden countries of New Grenada.

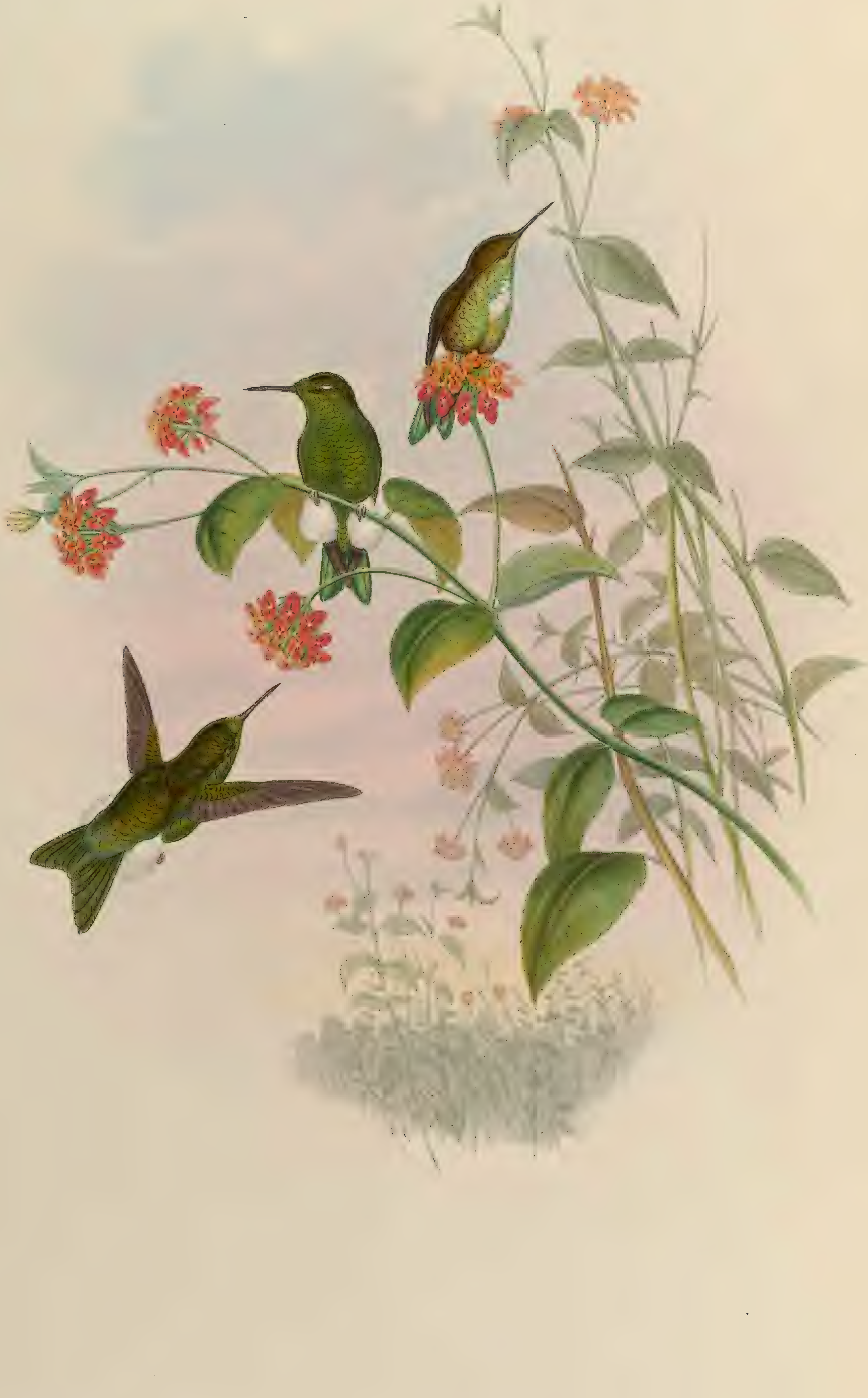
The *Eriocnemis Derbianus* is a species which differs very remarkably from every other member of the genus, both in the coal-black colouring of its feathered legs and in the brilliant metallic golden green of its upper and under tail-coverts. No other traveller but De Lattre has, I believe, obtained examples of this bird; by him, however, at least forty of both sexes were procured, all of which realized very high prices. These examples were so precisely alike both in colour and markings that they scarcely presented a shade of difference.

In the year 1846, MM. De Lattre and Bourcier named this species in honour of the late Earl of Derby, as a just tribute of respect to that distinguished nobleman, whose life was certainly not rendered less happy by his study of the branch of natural science to which he was so much attached.

The male has a wash of green on the forehead; the head, all the upper surface and wing-coverts of a golden bronzy hue; all the under surface shining golden green; wings purplish brown; upper and under tail-coverts brilliant metallic green; tail, feathers of the tarsi, and bill black.

The female has a wash of green on the forehead; all the upper surface golden bronze; under surface similar in hue, but lighter and more brilliant; upper and under tail-coverts metallic golden green; wings purplish brown; tail black; feathers of the tarsi black towards the knee and greyish white near the feet.

The Plate represents two males and a female of the size of life on the *Maxillaria leptosepala*.



ERIOCNEMIS ALINÆ.

J. Gould and H. C. Richter, del. et lith.

Hullmandel & Walton Imp.

ERIOCNEMIS ALINÆ.

Metallic Puff-leg.

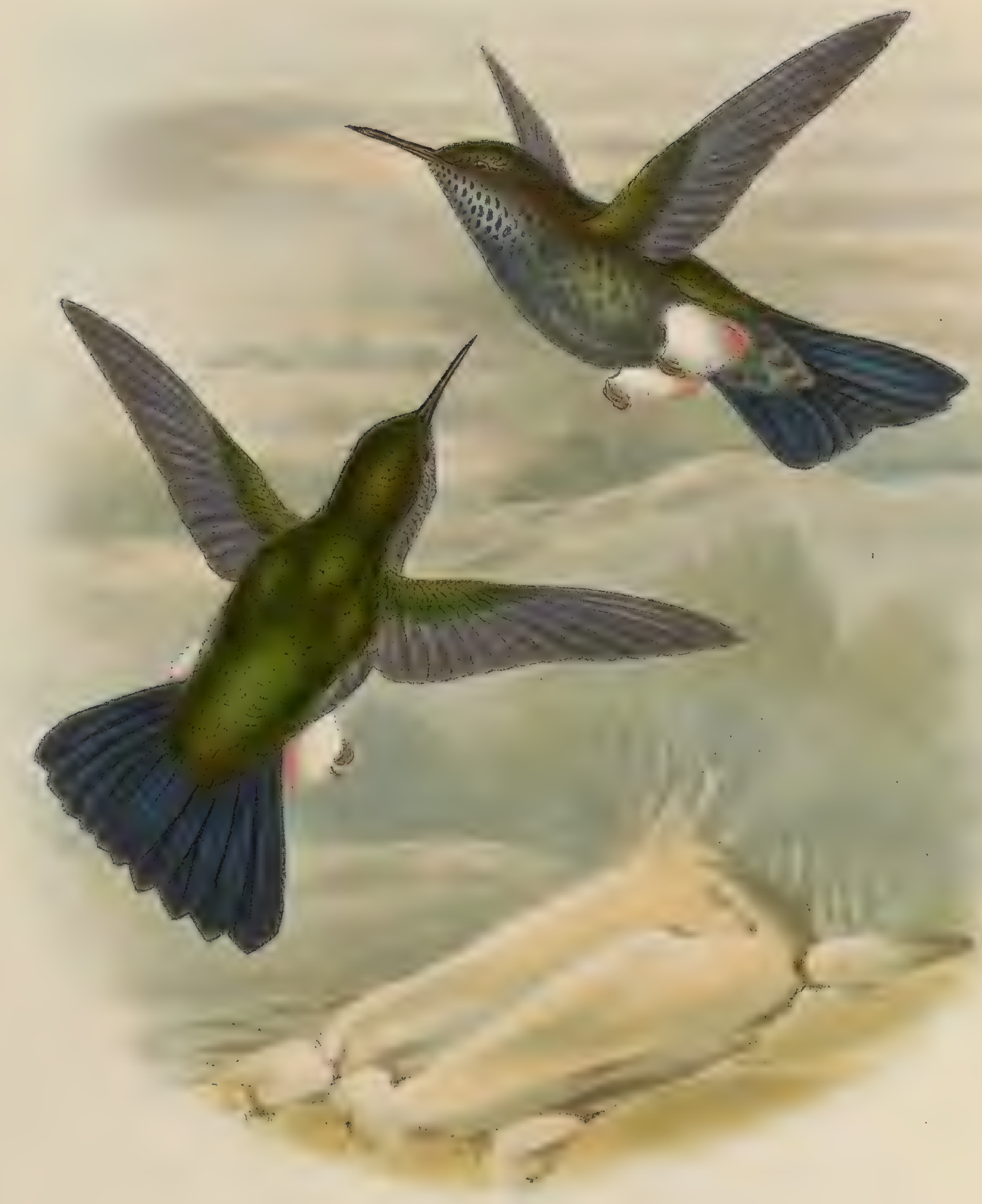
Ornismyia Aline, Bourc. Rev. Zool. 1842, p. 373.
Ornismya Alinæ, Ib. Ann. Sci. Phys. &c. de Lyon, 1842, p. 344. pl. 19.
Hylocharis Aline, Gray and Mitch. Gen. of Birds, vol. i. p. 114, *Hylocharis,* sp. 6.
Eriopus aline, Bonap. Consp. Gen. Av., p. 80, *Eriopus,* sp. 6.
Engyete Aline, Reich. Auf. der Col., p. 9.
Eriocnemys alina, Bonap. Rev. Zool. 1854, p. 252.

No one species of the well-defined genus *Eriocnemis* is more beautifully plumaged than the fully adult male of this little Bird, neither is there any one of them that has the peculiar puff-like decoration of the legs carried to so great an extent; no Bee ever hurried towards its hive with legs more loaded, or Beetle ever turned a more glittering breast towards the light, the entire under surface being one mass of green metallic colour. Having so beautiful an object to name, it is not surprising that the great French Trochilidist, M. Bourcier, when introducing it to the notice of the scientific world, should have given it that of *Aline,* in honour of his wife; and it gives me great pleasure to assist in perpetuating the name of a lady to whom such an act of courtesy has been rendered.

Thus much having been said about the beauty of the bird and its name, my next duty would be, were it possible, to give some account of its habits and economy; but on these points nothing is known, and I am merely able to state that it is a native of the rich district in the neighbourhood of Santa Fé de Bogota, whence nearly all the specimens sent to Europe have been forwarded. Although by no means a scarce bird, it is far less common than the *E. cupreiventris* and *E. vestitus.* There seems to be less difference in the colouring of the sexes of this species than in either of the others; but I observe that there is considerable diversity in the amount of the metallic colouring in individuals of the same sex, and I think it not unlikely that the bird attains a considerable age, and a high state of health and vigour, before it acquires the excessively glittering metallic hues seen in some specimens. It is somewhat singular that some of these very fine males exhibit a white or broken appearance in the centre of the chest, a mark which I believe to be perfectly natural; again, this bird, when fully adult, independently of its glittering breast, has a narrow well-defined band of the same colour across the forehead, immediately behind the bill, in which respect it differs from all the other members of its genus, and which probably induced Dr. Reichenbach to propose for it a new generic name—a name, however, I have not found it desirable to adopt, believing as I do that the feature indicated does not amount to more than specific importance.

Head, all the upper surface, wing-coverts and tail deep green, the upper tail-coverts and tail being somewhat brighter than the other parts; wings dark purplish brown; line across the forehead, and all the under surface, including the under tail-coverts, rich metallic glittering green; legs thickly clothed with downy white feathers; bill black; legs brown.

The Plate represents two males and a female of the natural size.



ERIOCNEMIS SQUAMATA, *Gould.*

J. Gould and H. C. Richter, del et lith.

Hullmandel & Walton Imp.

ERIOCNEMIS SQUAMATA, *Gould.*

Scaly Puff-leg.

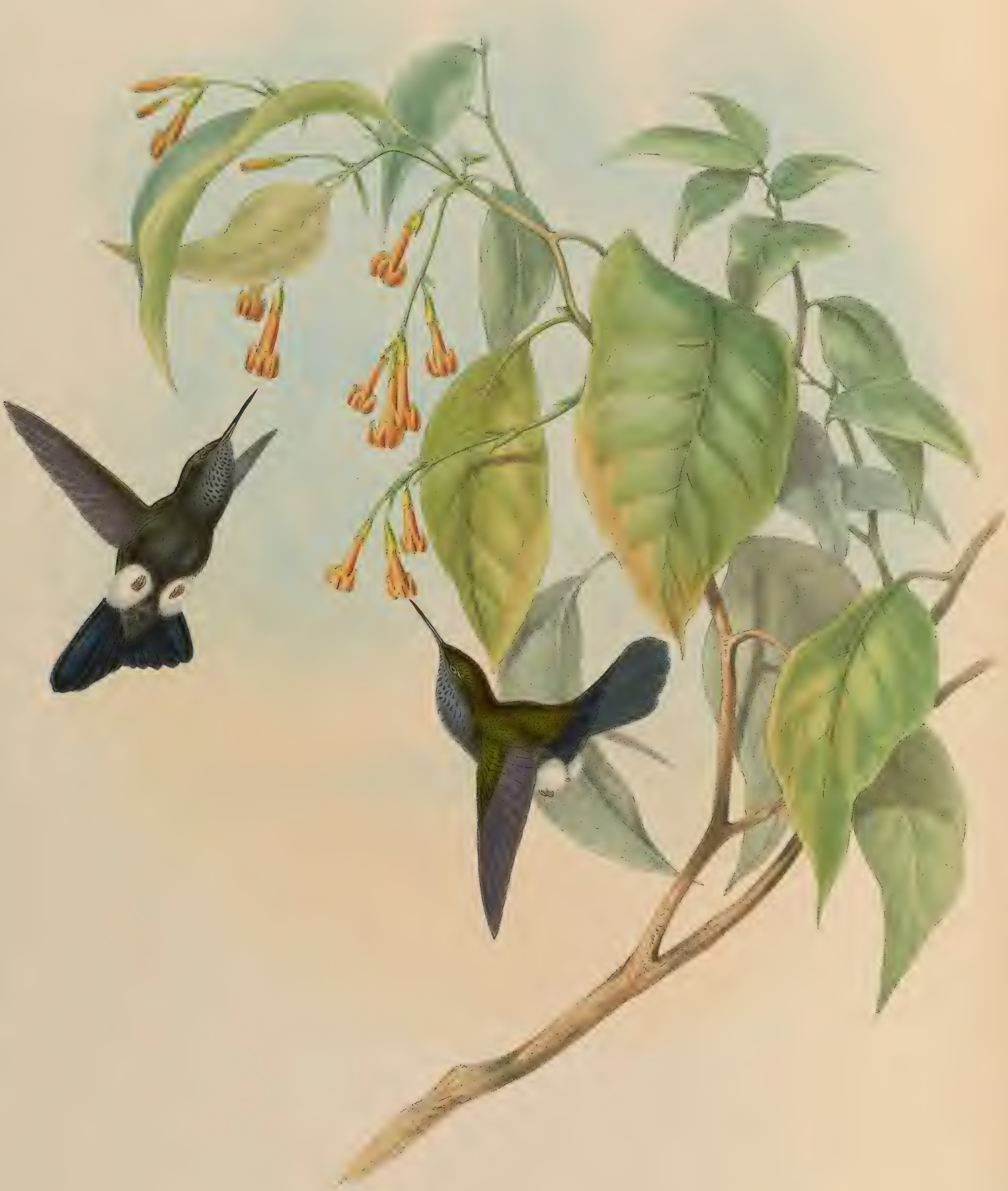
Eriocnemis squamata, Gould in Proc. of Zool. Soc., part xxviii. p. 311.

It is a question which can only be determined by time and the acquisition of a greater number of specimens than I now possess, whether the bird here represented be or be not identical with the *Eriocnemis lugens.* At present this appears to be somewhat uncertain; but my own opinion is that it will ultimately prove to be a distinct species. Of both these birds my collection contains all the examples I have ever seen; these comprise at least four specimens of the *E. lugens,* and two of *E. squamata.* They were all received from Ecuador, but were collected in very different localities; I have therefore very little doubt of their being distinct; and if so, they, together with a third species (*E. Aureliæ*), will constitute a small subdivision among the *Eriocnemides.* All three birds are clothed in a very sombre-coloured livery; two of them (namely, *E. squamata* and *E. Aureliæ*) have parti-coloured boots, while the *E. lugens* has its legs clothed with white. A glance at the Plates representing these three species will give a better idea of the differences they present than the most minute description.

Many years have now elapsed since I received, direct from Professor Jameson of Quito, the examples I possess of *E. lugens*; but it was not until very lately (just previous to the close of the present work) that the *E. squamata* came to hand. Independently of its parti-coloured boots, the latter bird differs from both its congeners in its far greater size; it is, in fact, a more robust bird than either of them.

Crown of the head, back of the neck, upper surface, sides of the neck and flanks coppery bronze, inclining to green on the back and to rust-colour on the upper tail-coverts; throat, chest, and centre of the abdomen hoary grey with green and coppery reflexions; in certain lights the feathers of the throat and chest appear to be edged with grey, giving those parts a scaled appearance—hence the specific name; under tail-coverts smoky grey; anterior portion of the feathers clothing the tarsi white, the posterior portion buff; tail dull steel-black; wings purplish brown; bill black.

The figures are of the natural size.



ERIOCNEMIS LUGENS, *Gould.*

J. Gould and H. C. Richter, del et lith *Hullmandel & Walton Imp*

ERIOCNEMIS LUGENS, *Gould.*

Hoary Puff-leg.

Eriopus lugens, Gould in Jard. Cont. to Orn. for 1851, p. 140.
Eriocnemys lugens, Bonap. Consp. Troch. in Rev. et Mag. de Zool. 1854, p. 252.

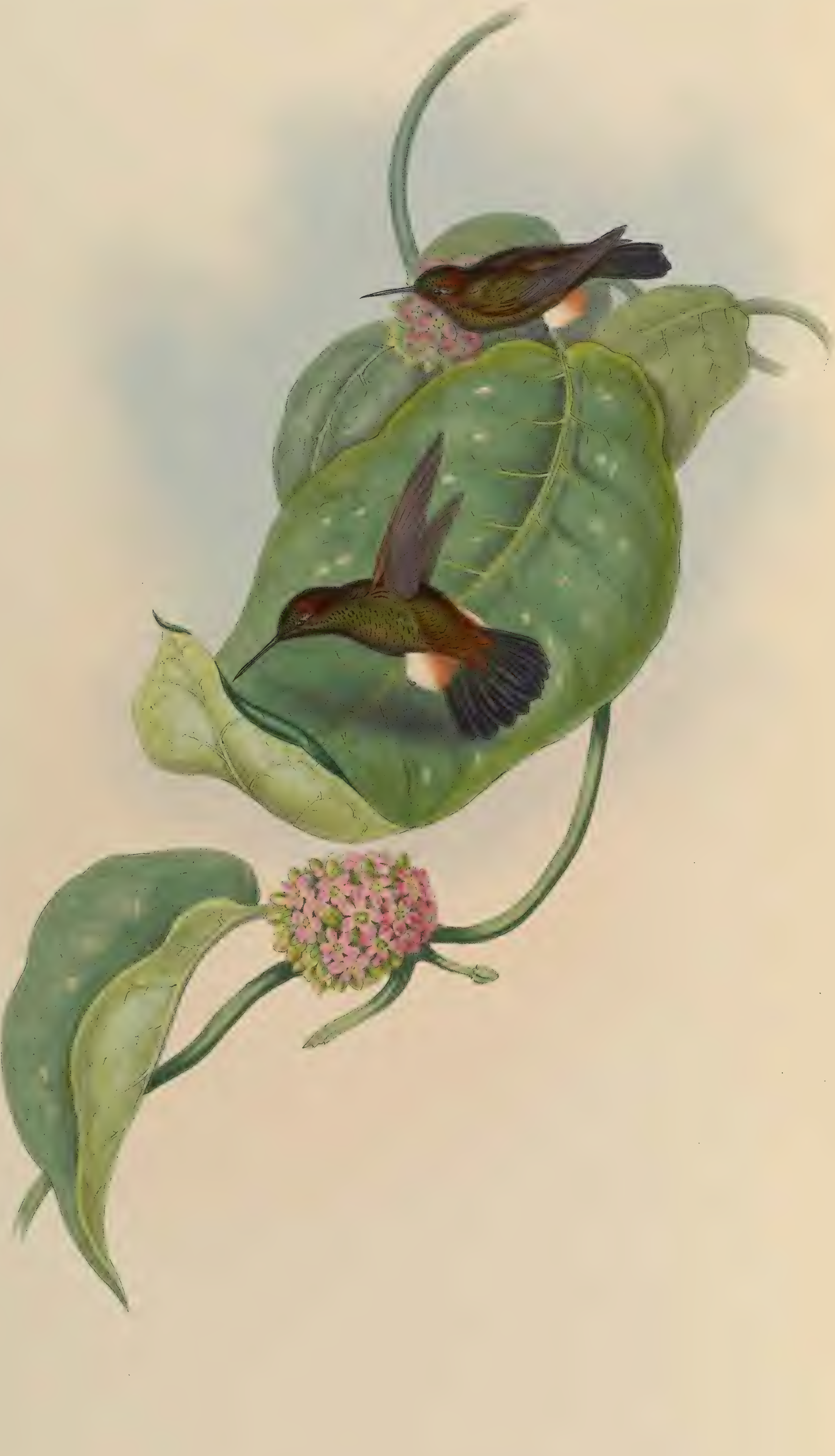
I RECEIVED my first specimen of this new bird through the kindness of Professor Jameson of Quito, who collected it at a considerable elevation on the western side of Pichincha; a second and very similar example I procured of M. Parzudaki of Paris, and these are all that I have yet seen.

The Hoary Puff-leg is a true *Eriocnemis* in every respect, and is somewhat allied to *E. cupreoventris* and *E. simplex.* I am unable to say whether the specimens I possess are of opposite sexes or not, but, judging from analogy, I suspect that no difference occurs in the outward appearance of the males and females.

From the sombre colouring, and the dense and lax plumage of this species, it would appear to be adapted for cold and elevated regions.

Crown of the head, back, shoulders and upper tail-coverts bronzy green, slightly tinged on the latter with rufous; throat, abdomen and under tail-coverts hoary black, with a tinge of green on the flanks, and a narrow fringe of white on each of the feathers of the throat and chest, giving those parts a scaly appearance; wings purplish black; tail bluish black; feathers of the thighs white, and lengthened so as to form a puff; front of the tarsi and toes purplish black, yellowish beneath; bill black, with a yellowish tint on the base of the lower mandible.

The figures are the size of life.



ERIOCNEMIS AURELIÆ.

J Gould and H C Richter, del et lith

Hullmandel & Walton, Imp

ERIOCNEMIS AURELIÆ.

Aurelia's Puff-leg.

Trochilus Aureliæ, Bourc. et Muls. Ann. de la Soc. des Sci. &c. de Lyon, 1846, p. 315, pl. not numbered.—Ib. Rev. Zool. 1846, p. 316.
Hylocharis Aureliæ, Gray and Mitch. Gen. of Birds, vol. i. p. 114, *Hylocharis,* sp. 8.
Eriopus aureliae, Bonap. Consp. Gen. Av., p. 80, *Eriopus,* sp. 8.
Eriocnemys aurelia, Ib. Rev. et Mag. de Zool. 1854, p. 252.
Eriocnemis Aureliae, Reichenb. Aufz. der Colibris, p. 9.

By far the greater number of the species of this well-defined genus have the puff-like feathers clothing the legs of a snowy whiteness; in one, however, the *E. Derbyanus,* they are black; and in the bird now under consideration they are parti-coloured, or brown and white.

I have seen examples of this species from various parts of the hilly districts of Columbia, over which country it appears to enjoy a wide range, and where it has been killed by M. Warszewicz and other collectors. Specimens from the neighbourhood of the River Napo have longer bills, and are altogether larger birds than those from Bogota; so great a similarity, however, otherwise exists between them, that, for the present, I shall consider them as merely distinct races or local varieties of one and the same species.

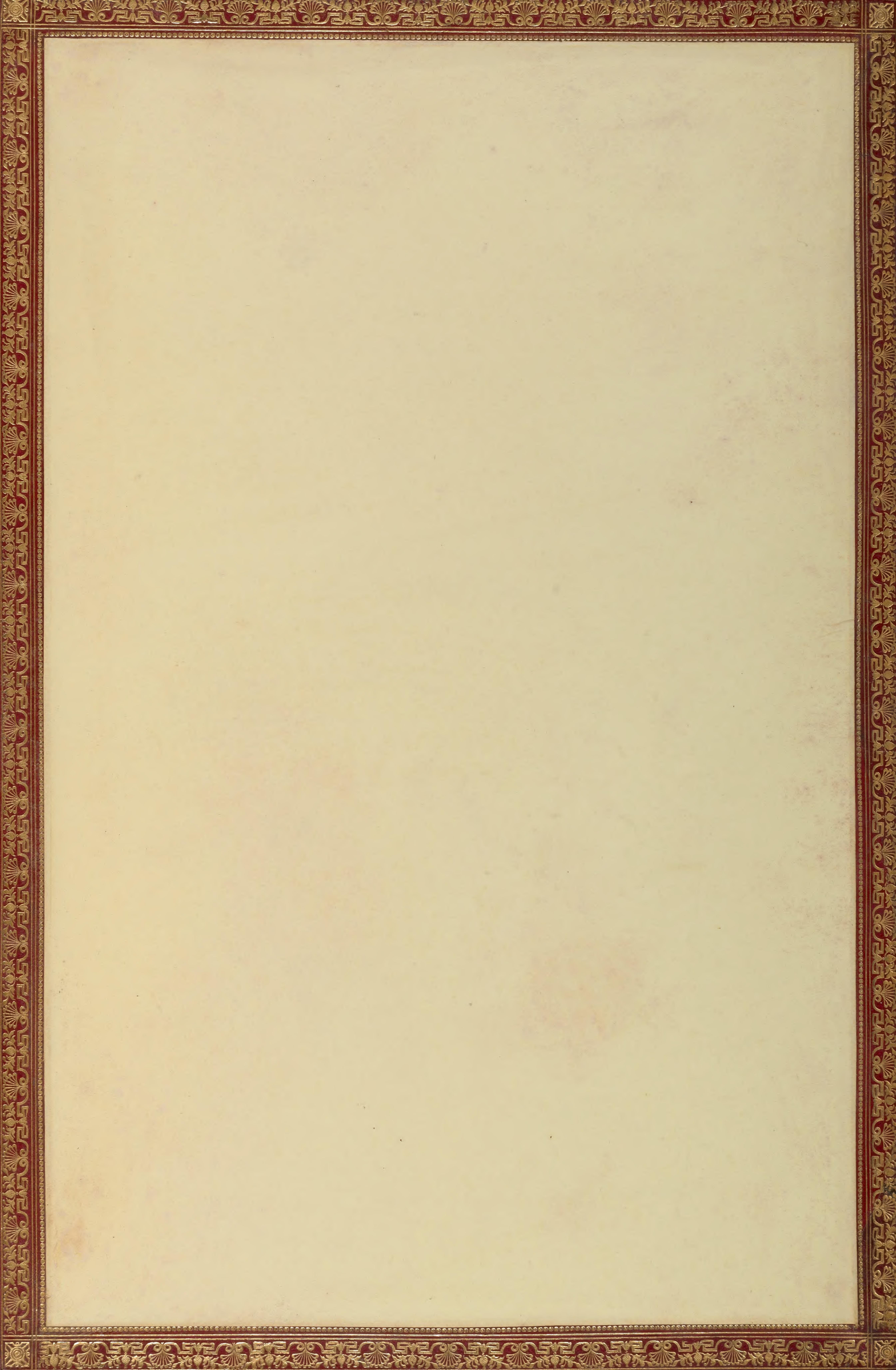
The *Eriocnemis Aureliæ* was first described by MM. Bourcier and Mulsant, from Bogota specimens, and I also figure a bird from the same district. These gentlemen state that they have named it *Aureliæ* in honour of the wife of M. Hénon, Secretary-General of the Society of Agriculture, and one of the most distinguished naturalists of the City of Lyons.

But little difference occurs in the colouring of the sexes; the female, however, has the puff-like feathers of the legs of a smaller size, and whiter or less parti-coloured than those of the male; and the young has the lower part of the abdomen white.

Head, upper surface and wing-coverts dark bronzy green, the green hue predominating on the centre of the back, and a tinge of rufous on the head; wings purplish brown; upper tail-coverts dark coppery bronze; tail dark bluish black, with a bronzy lustre at the base; under surface bronzy green, very dark on the throat, and becoming gradually paler towards the vent, where the feathers are fringed with white; feathers of the thighs pale chestnut and white; under tail-coverts grass-green; bill brown, paler at the base of the under mandible.

The young bird of the first year has the head and neck coppery bronze; upper surface green; throat violaceous brown; lower part of the abdomen white; and the under tail-coverts grey, with a trace only of the green of the adult state.

The figures are of the natural size. The plant is the *Marsdenia maculata.*



SMITHSONIAN INSTITUTION LIBRARIES
3 9088 00990 4954